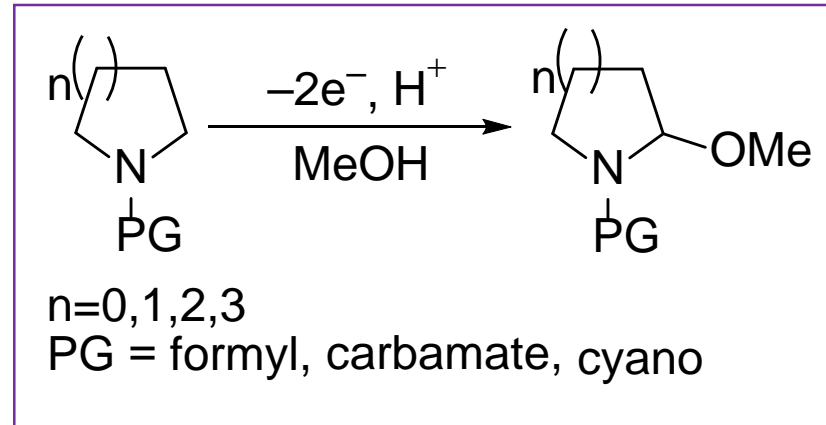
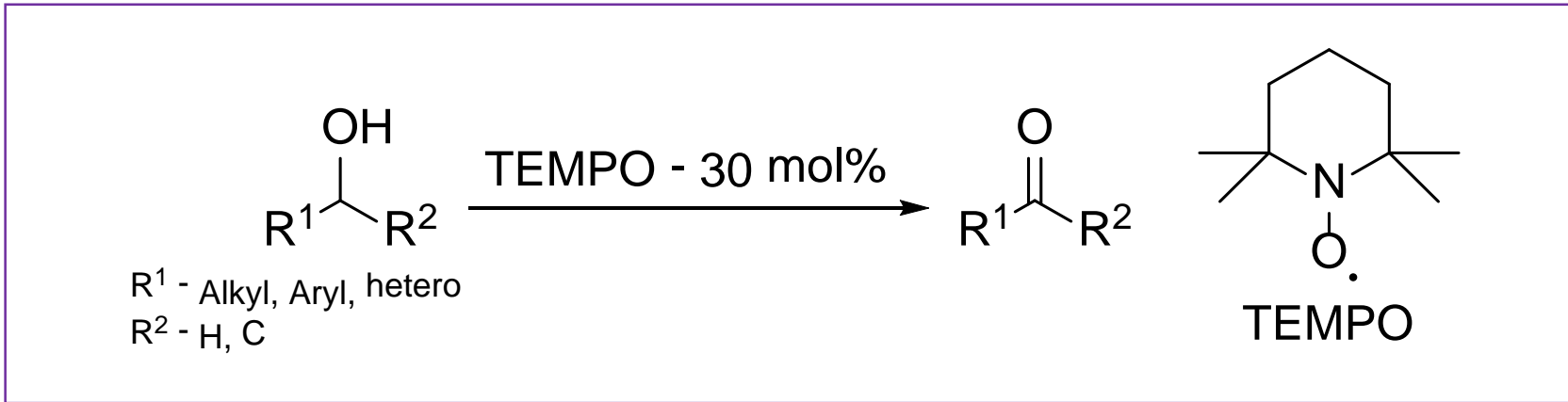


# Iminium Methoxylations



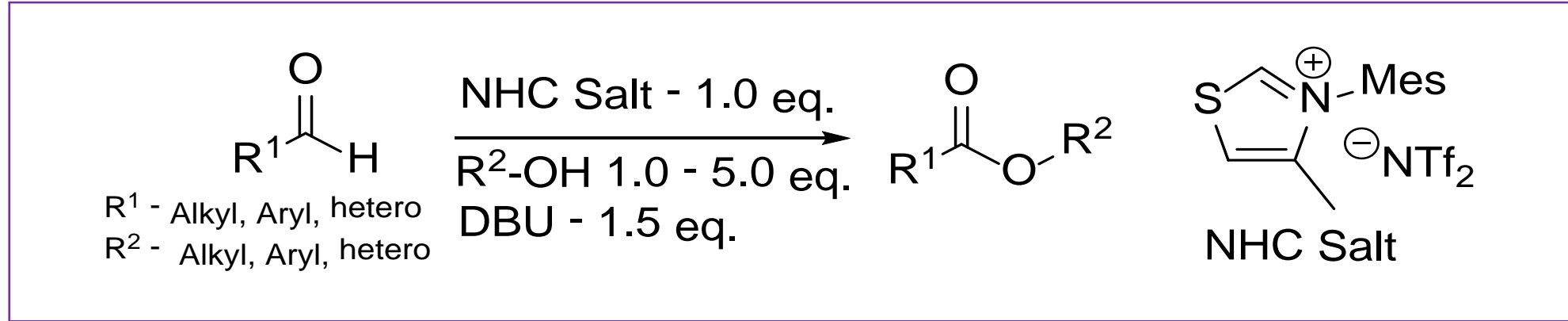
- ❖ **Solvent: Methanol**
- ❖ **Electrolyte: Et<sub>4</sub>NBF<sub>4</sub>**
- ❖ **Counter Electrode Reaction: Reduction of Methanol; Formation of MeO<sup>-</sup>**
- ❖ **Anode: Carbon filled PVDF**
- ❖ **Cathode: Stainless Steel**

# TEMPO Mediated Alcohol Oxidation



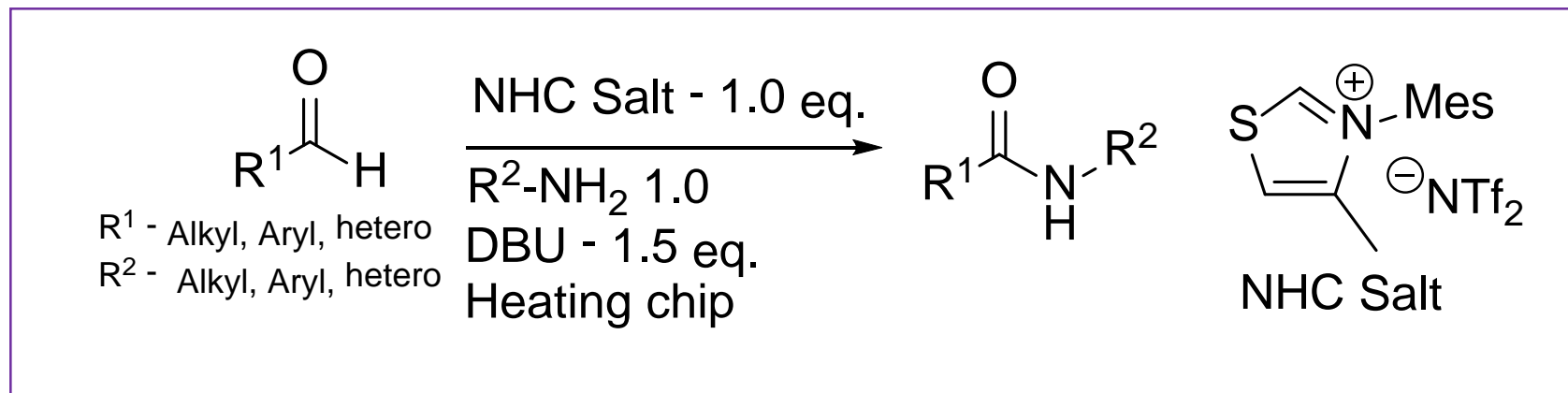
- ❖ Solvent: <sup>t</sup>BuOH/Water (1:1)
- ❖ Electrolyte: Na<sub>2</sub>CO<sub>3</sub>/NaHCO<sub>3</sub> buffer, pH 11.5
- ❖ Counter Electrode reaction: reduction of water, formation of OH<sup>-</sup>
- ❖ Anode Material: Carbon filled PVDF
- ❖ Cathode Material: Stainless steel

# NHC Mediated Esterification



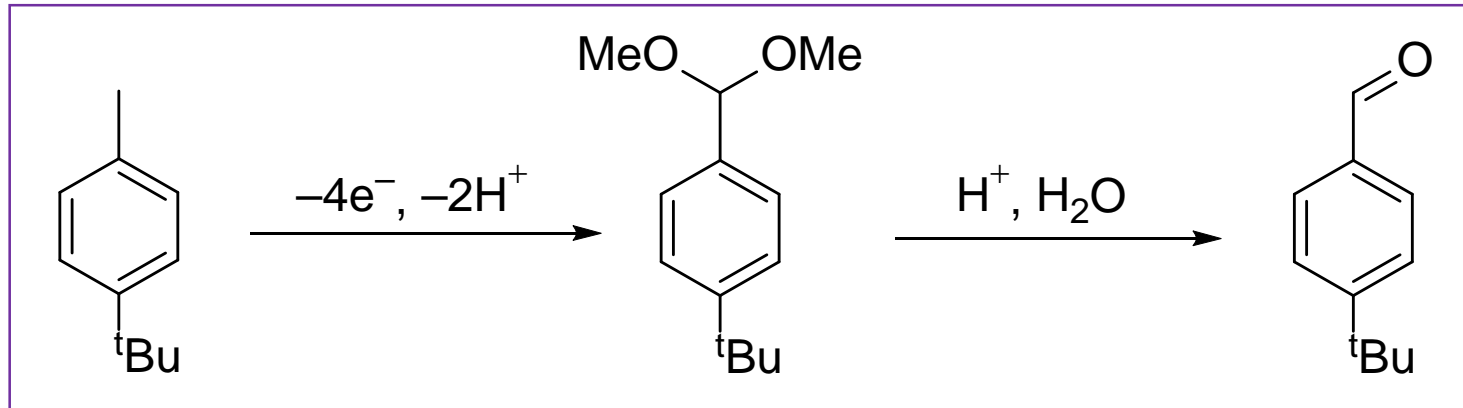
- ❖ **Solvent: THF/DMSO**
- ❖ **Electrolyte: NHC salt**
- ❖ **Counter Electrode reaction: reduction of DBU salt**
- ❖ **Anode Material: Carbon filled PVDF**
- ❖ **Cathode Material: Stainless steel**

# NHC Mediated Amidation



- ❖ **Solvent: DMF**
- ❖ **Electrolyte: NHC salt**
- ❖ **Counter Electrode Reaction: reduction of DBU salt**
- ❖ **Anode Material: Carbon filled PVDF**
- ❖ **Cathode Material: Stainless steel**

# Toluene Oxidation

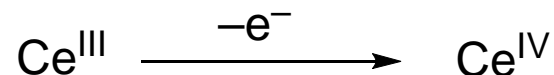


- ❖ Solvent: MeOH
- ❖ Electrolyte:  $NEt_4BF_4$
- ❖ Counter Electrode Reaction: MeOH reduction, formation of methoxide
- ❖ Anode Material: Carbon filled PVDF
- ❖ Cathode Material: Stainless steel

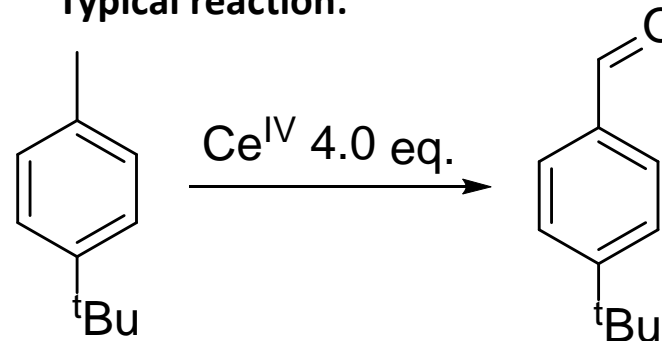
# Ce<sup>IV</sup> Generation



Electrochemical reagent generation:

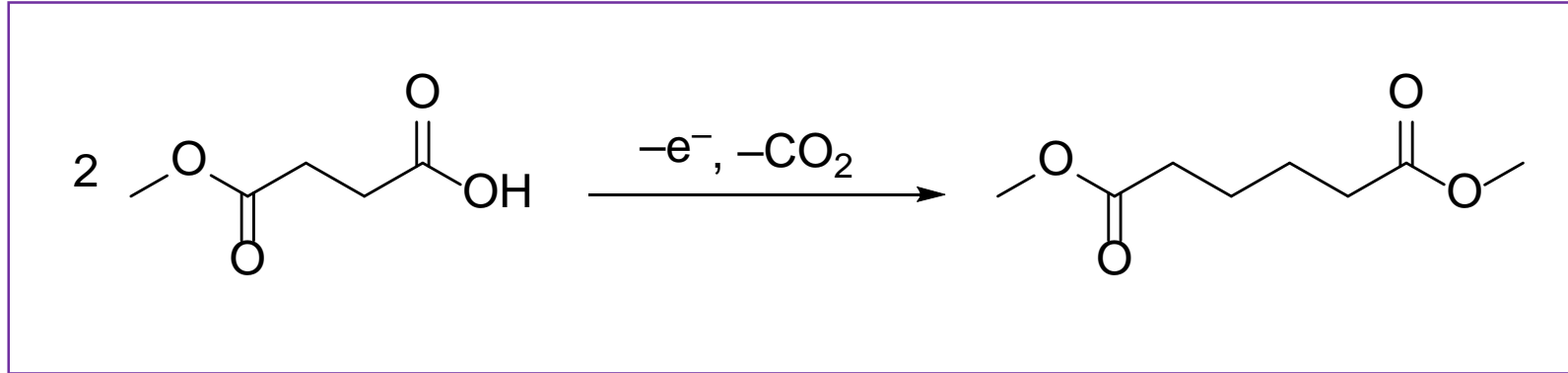


Typical reaction:



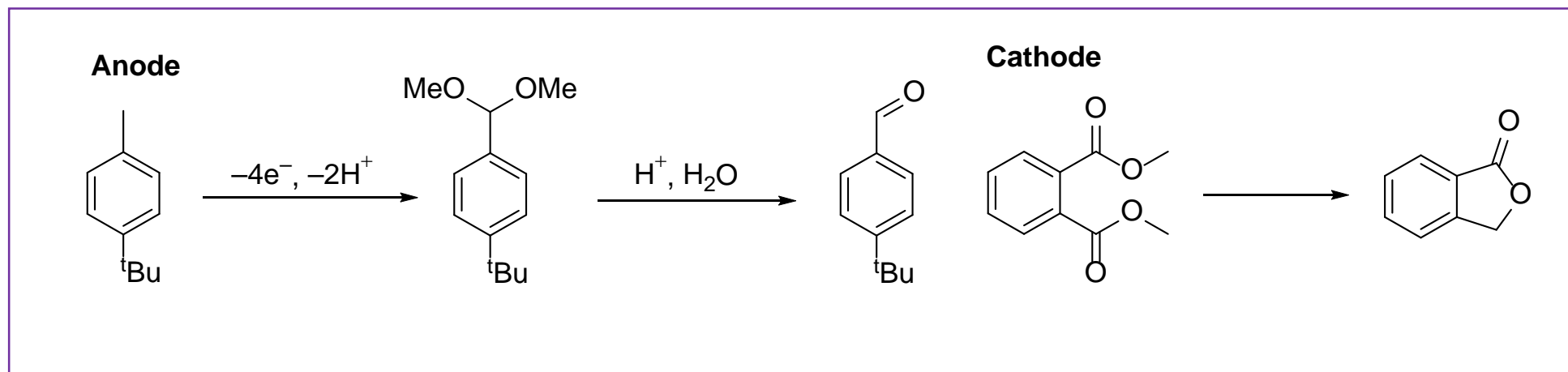
- ❖ Solvent: H<sub>2</sub>O
- ❖ Electrolyte: Methanesulfonic acid
- ❖ Counter Electrode Reaction: H<sup>+</sup> reduction
- ❖ Anode Material: Pt
- ❖ Cathode Material: Stainless steel

# Kolbe Dimerisation



- ❖ Solvent: MeOH
- ❖ Electrolyte: KOH (5-25 mol%)
- ❖ Counter Electrode Reaction: MeOH reduction, formation of base
- ❖ Anode Material: Pt
- ❖ Cathode Material: Stainless steel

# Paired Electrosynthesis



- ❖ **Solvent: MeOH**
- ❖ **Electrolyte: KOH (10 mol%)**
- ❖ **Anode Material: Carbon filled PVDF**
- ❖ **Cathode Material: Carbon filled PVDF**