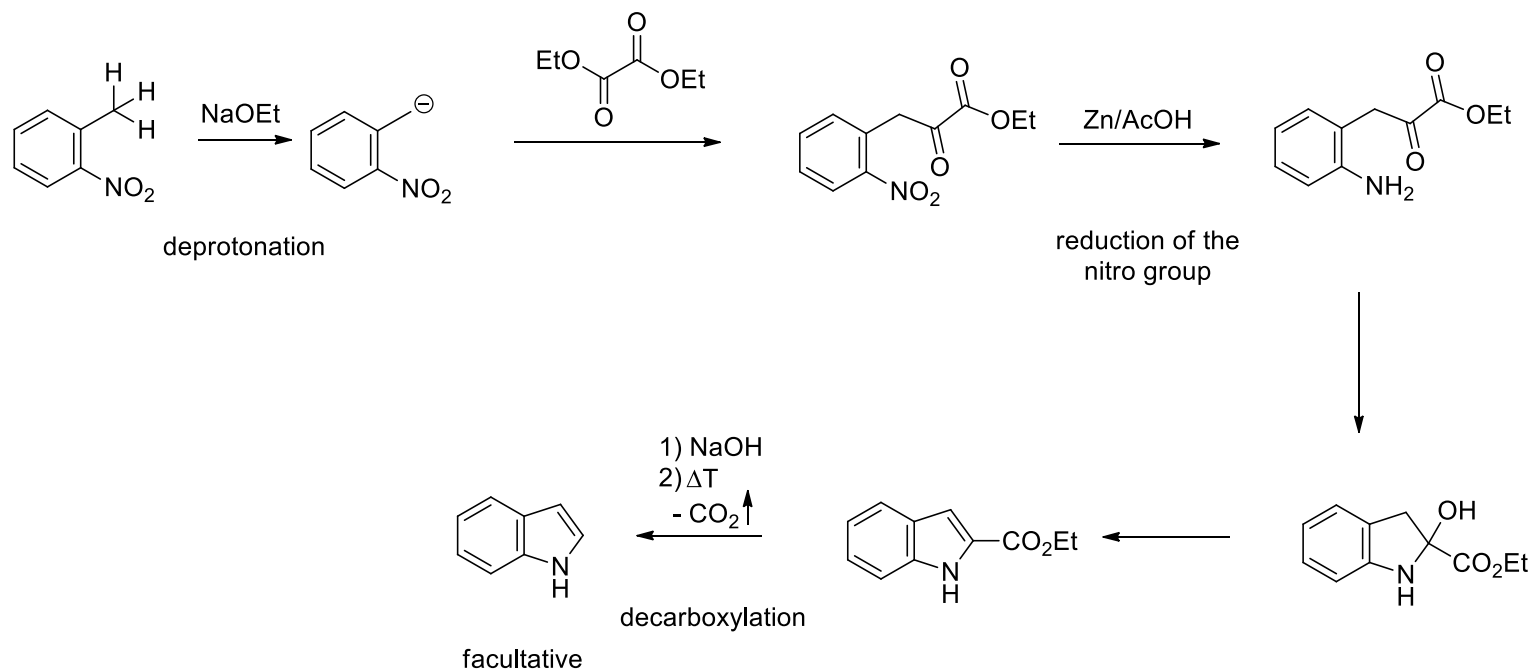


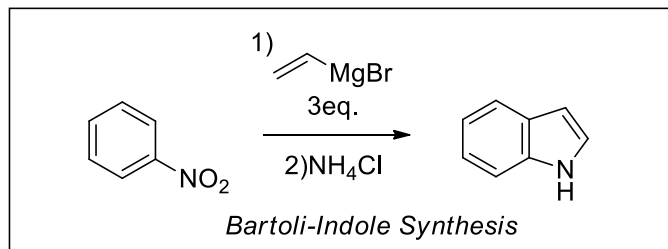
2.3.4. Indole syntheses

- Reissert synthesis:

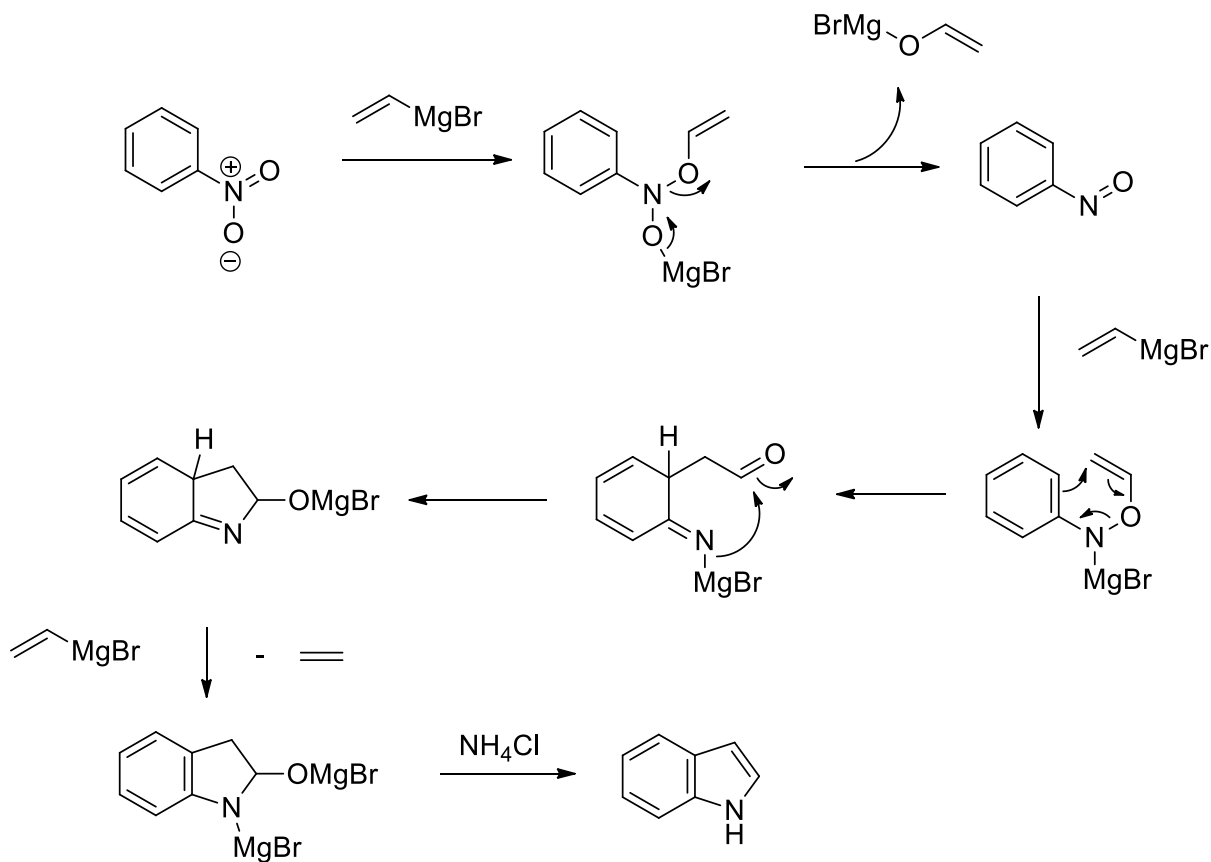


2.3.4. Indole syntheses

- Bartoli-Indole synthesis:

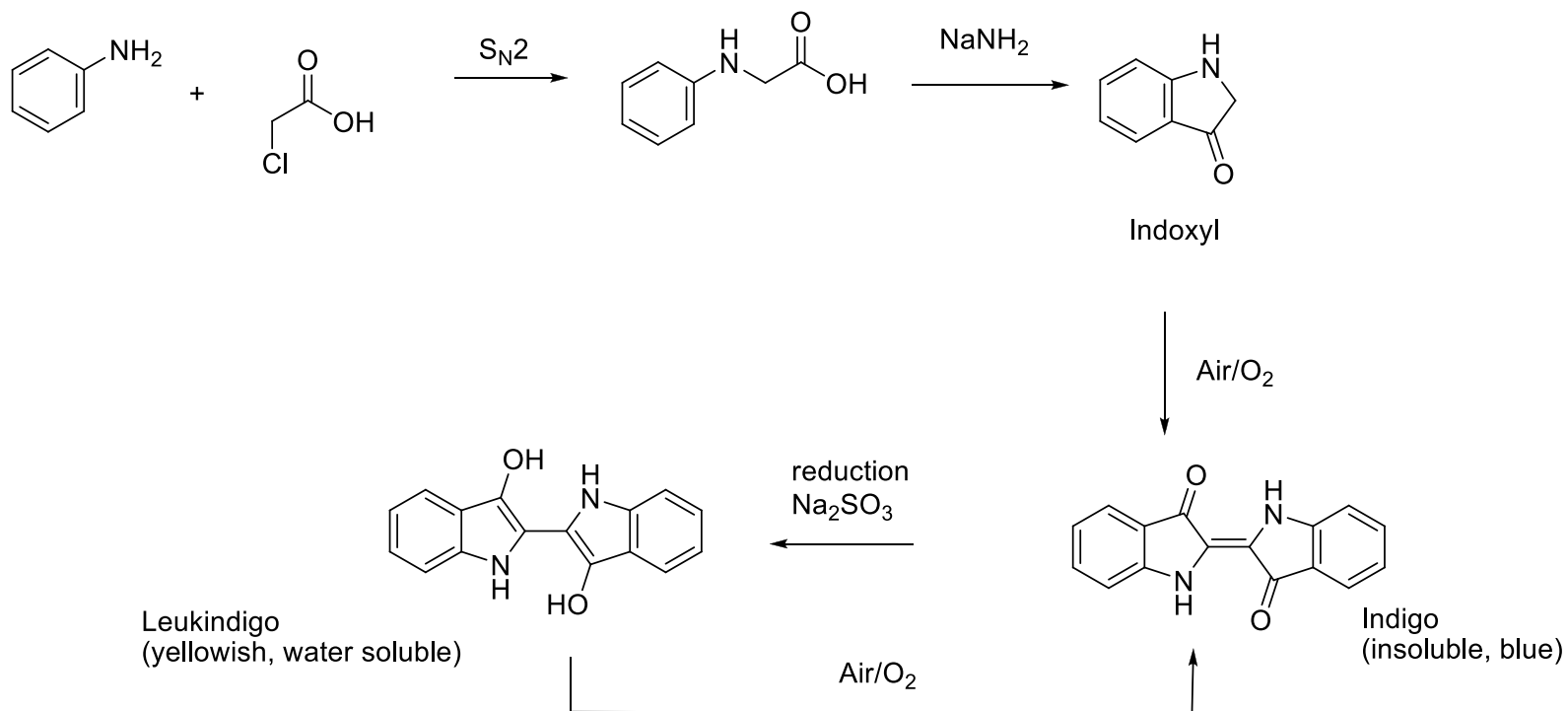


Mechanism:



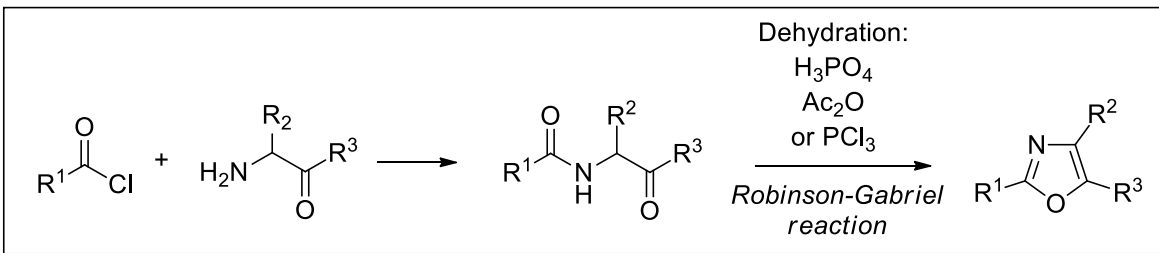
2.3.4. Indole syntheses

- Example: technical synthesis of Indigo (dye for blue jeans)

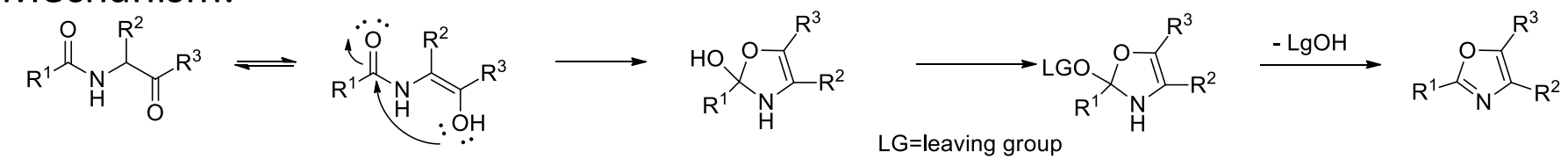


2.3.5. Oxazole syntheses

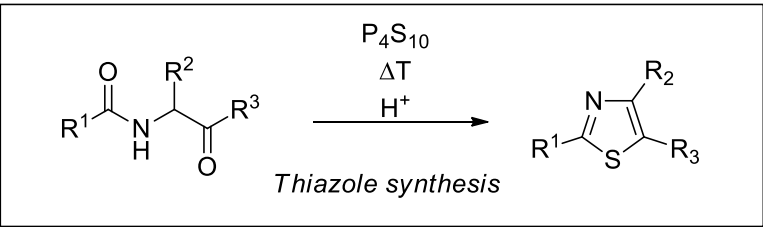
- Robinson-Gabriel reaction:



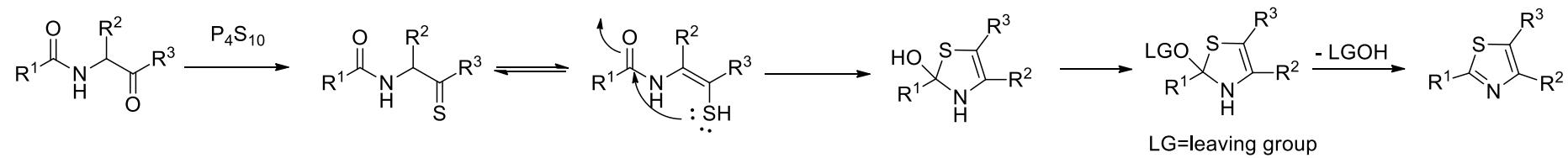
Mechanism:



- Analog for thiazole synthesis:

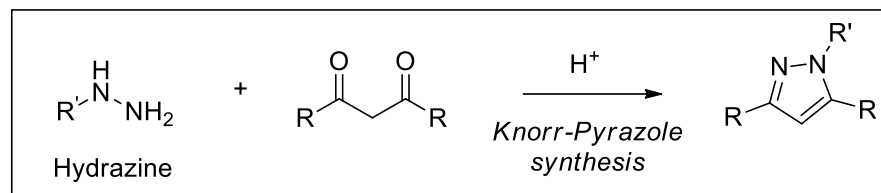


Mechanism:

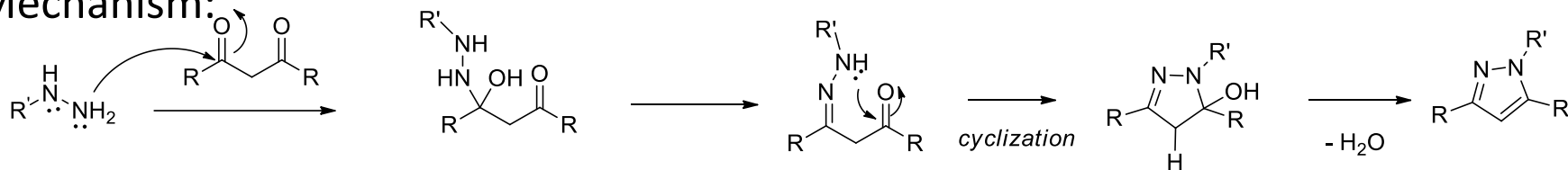


2.3.6. Pyrazole and Isoxazole syntheses

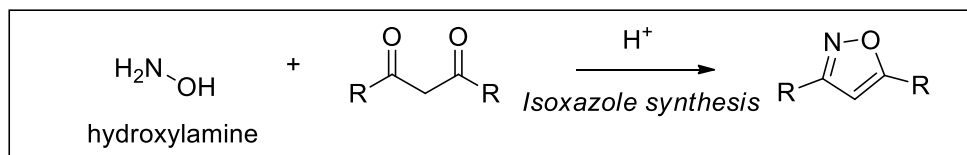
- Knorr-Pyrazole synthesis:



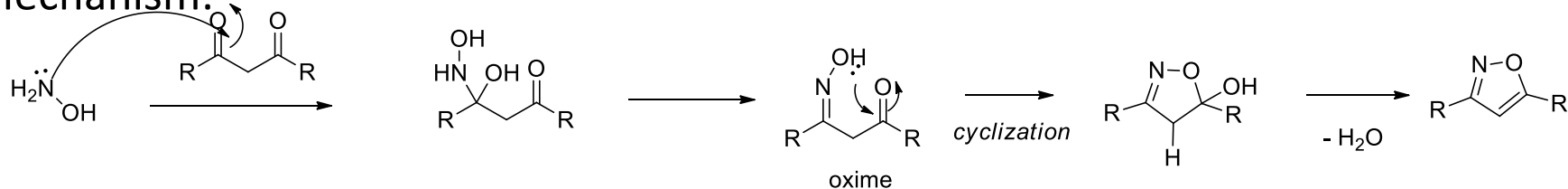
Mechanism:



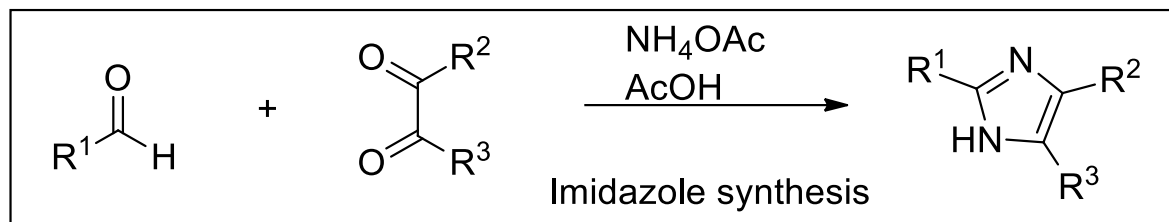
- Similar for isoxazole synthesis:



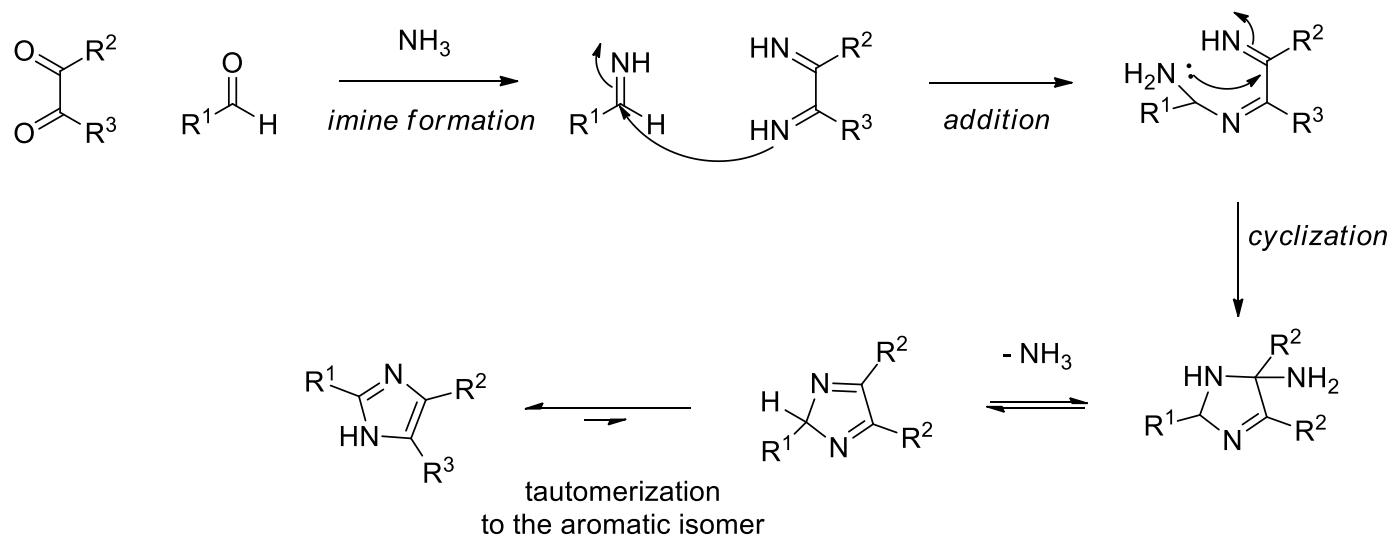
Mechanism:



2.3.7. Imidazole syntheses



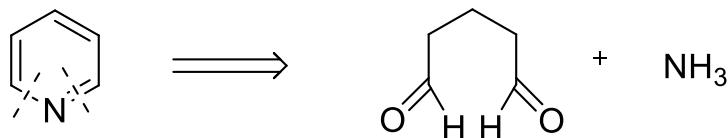
Mechanism:



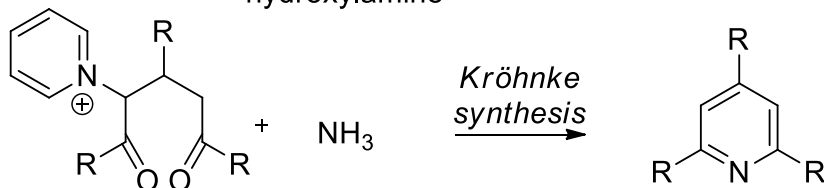
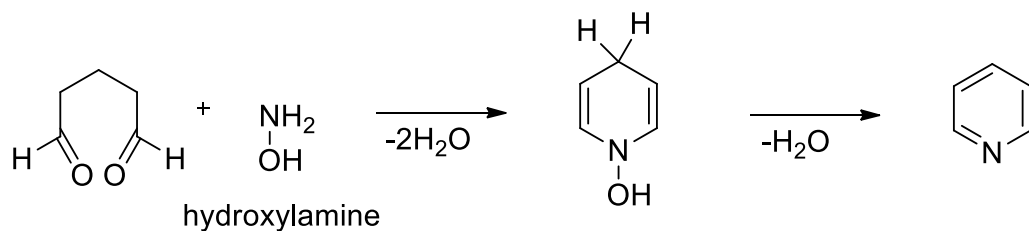
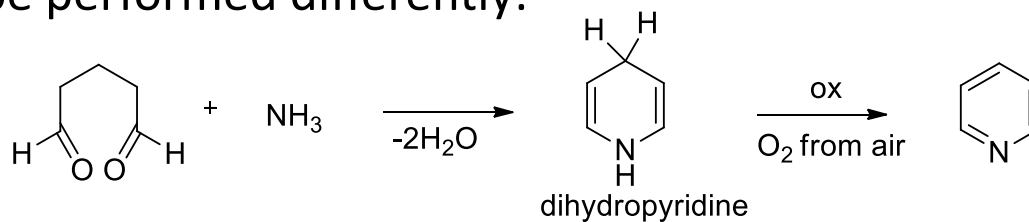
2.4.1. Pyridine syntheses

- Retrosynthesis:

Common strategy: cuts around the heteroatom



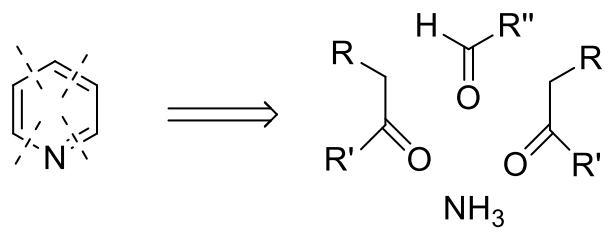
Reaction can be performed differently:



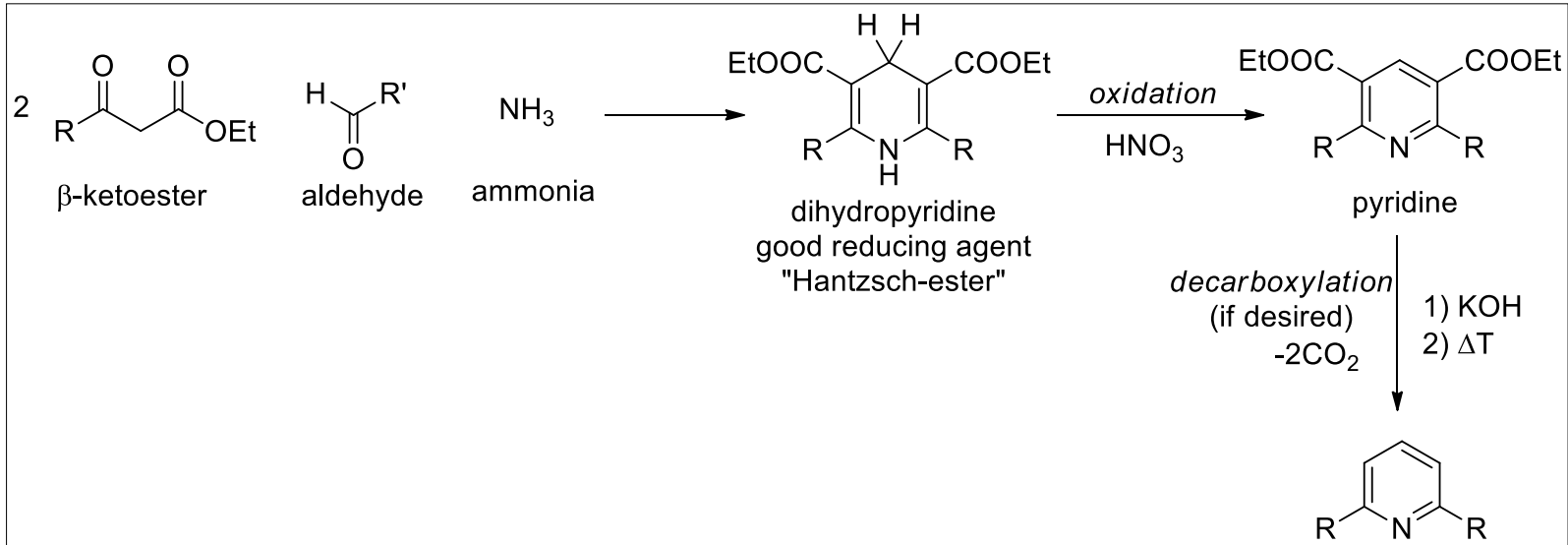
2.4.1. Pyridine syntheses

- Hantzsch (dihydro)pyridine synthesis:

- Strategic disconnections:

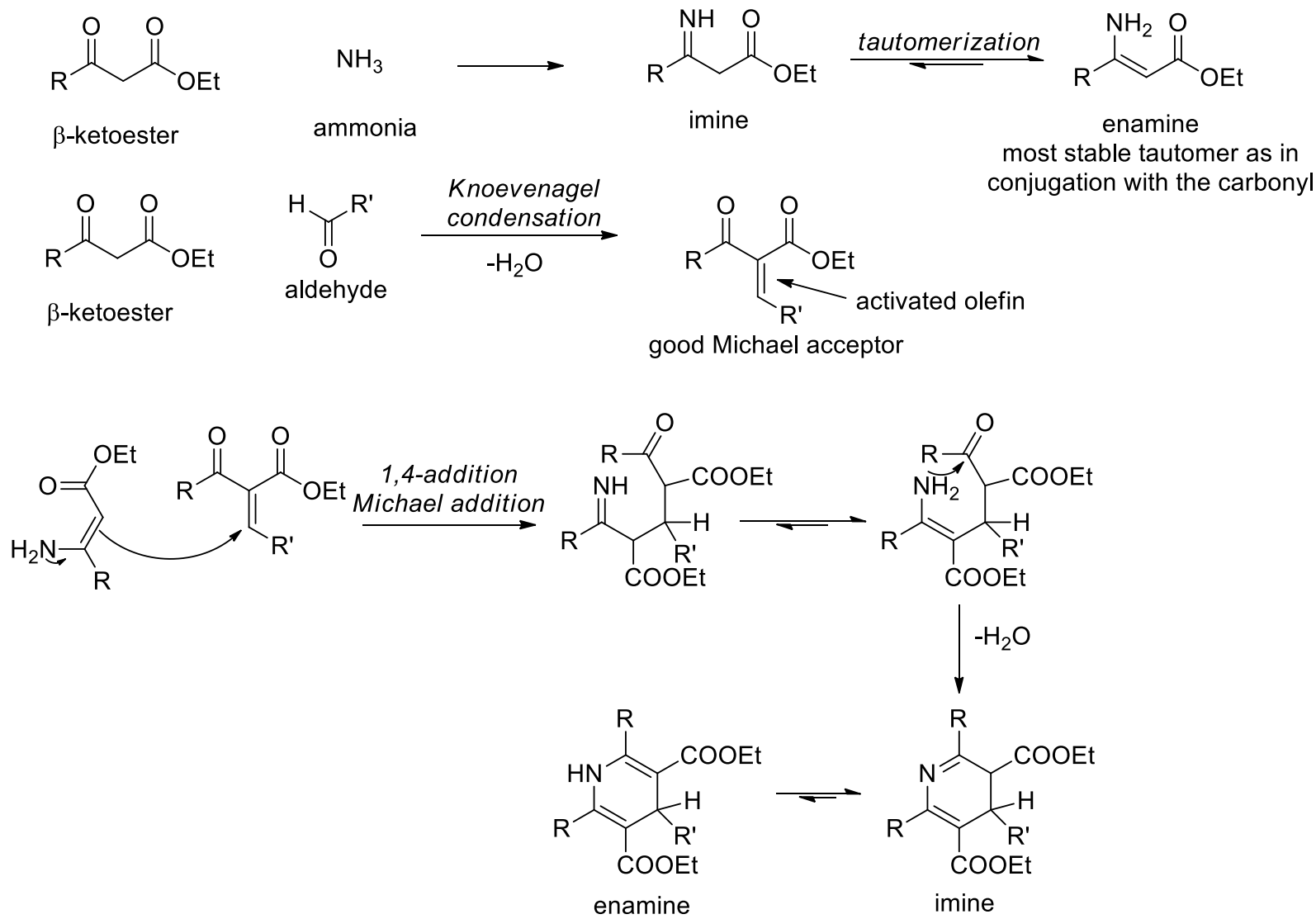


- Synthesis



2.4.1. Pyridine syntheses

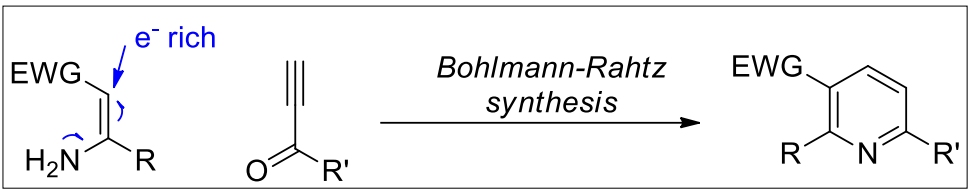
- Mechanism:



2.4.1. Pyridine syntheses

- Bohlmann-Rahtz pyridine synthesis:

- Synthesis:



- Mechanism:

