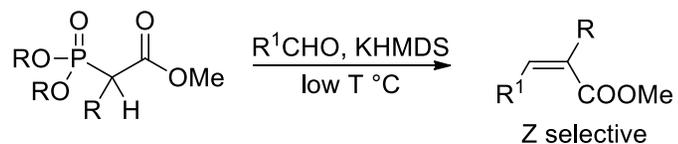


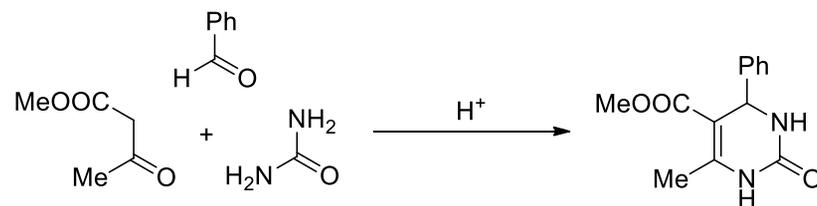
Olefinations - Still Gennari 1983



why? draw a model and explain

Biginelli MCR 1891

Piero Biginelli (1860-1937)
pupil of Guareschi
MCR: pharmaceuticals
Kappe mechanism



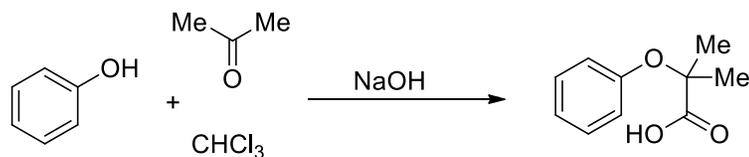
what is the mechanism?

tethered version used in total synthesis:

Overman and coworkers. *Chem. Commun.*, 2004, 253–265

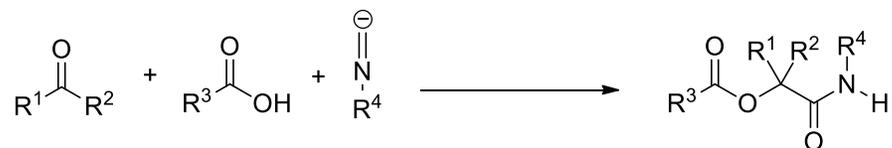
Bargellini MCR 1906

Guido Bargellini (1879–1963)
PostDoc of Fischer
MCR: target of coumarins, never achieved
Versatile reaction



what is the mechanism?

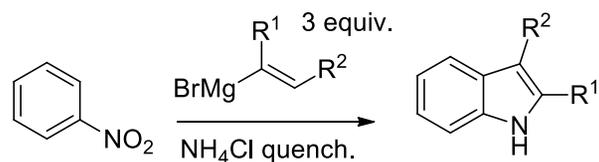
Passerini MCR 1921



Faster with aprotic solvents, high concentrations and r.t.
Mechanism differ depending from solvents

Propose a mechanism for: *protic solvents*
non protic solvents

Bartoli Indole Synthesis

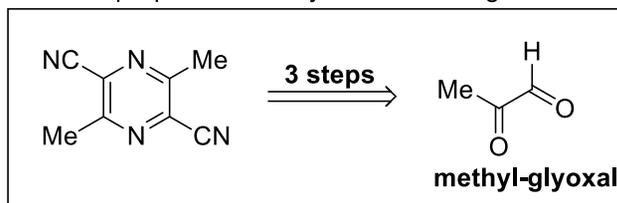


why 3 equiv. of Grignard?
what is the mechanism?
comment the regioselectivity

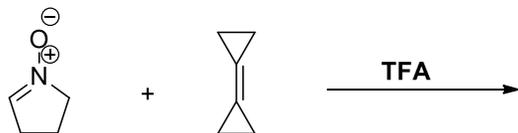
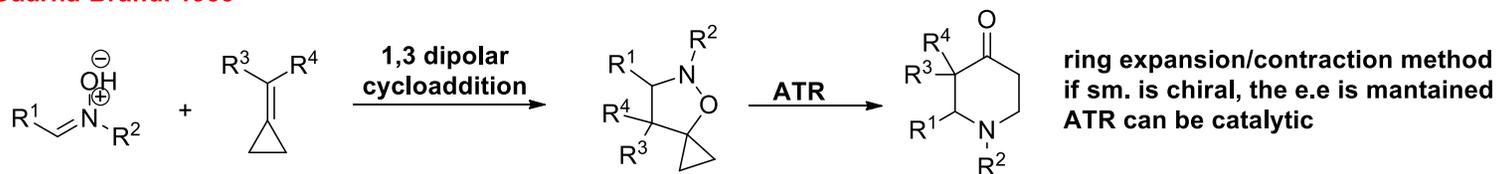
Gastaldi Pyrazine Synthesis 1921

Carlo Gastaldi (1879–1963)
Pyrotechnic laboratory during the WWI
Pyrazine Interest

propose a retrosynthesis starting from:

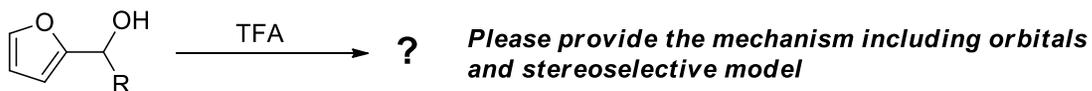


Guarna-Brandi 1985



products?
J. Org. Chem., **2009**, 74, 4225–4231

Piancatelli 1976



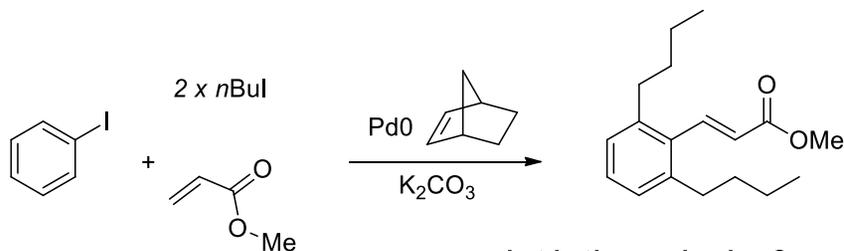
Catellani Reaction 1997

Palladium-catalyzed 3 component reaction

Both C-X and C-H activation

Pd^x in ALL oxidation states

Angew. Chem. Int. Ed. **1997**, 36, 119



what is the mechanism?
Why are the base/norbornene is essential?
Why is the Norbornene eliminated?
What would happen in reductive conditions?
How do you explain the regioselectivity?