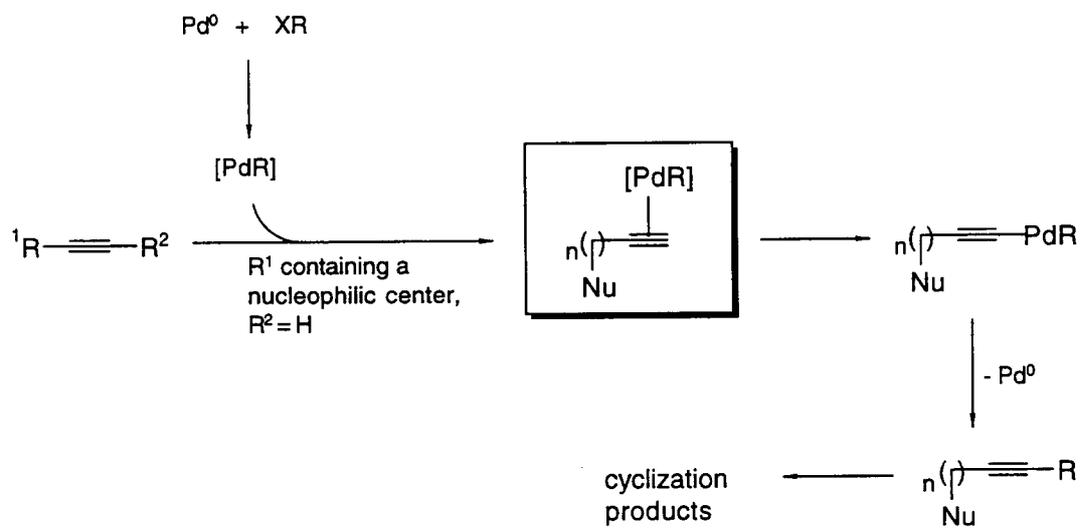
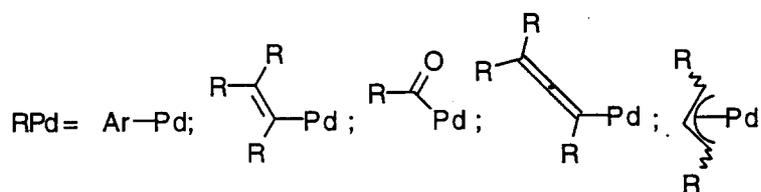
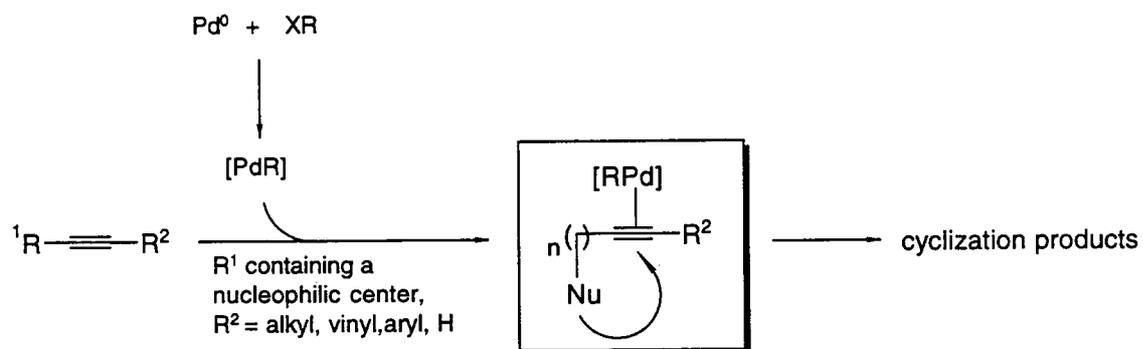
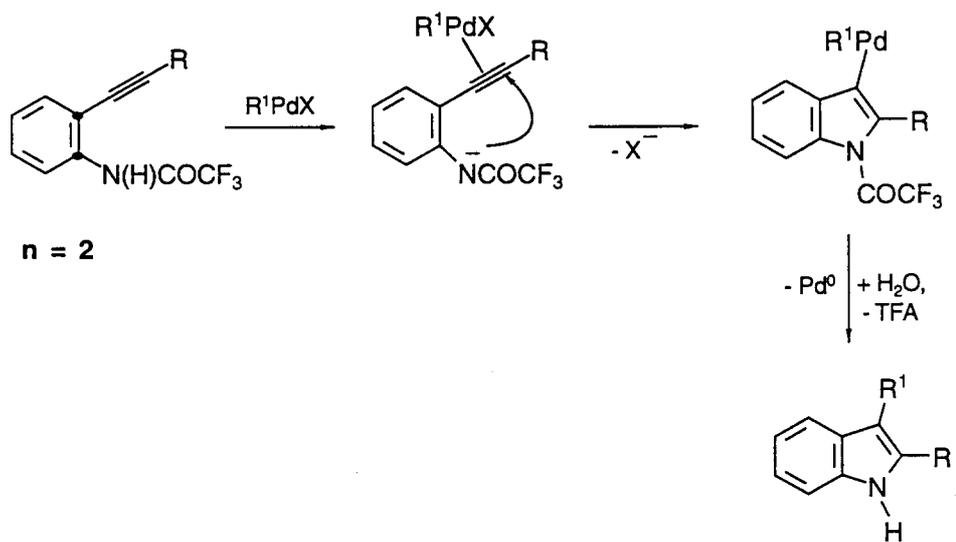


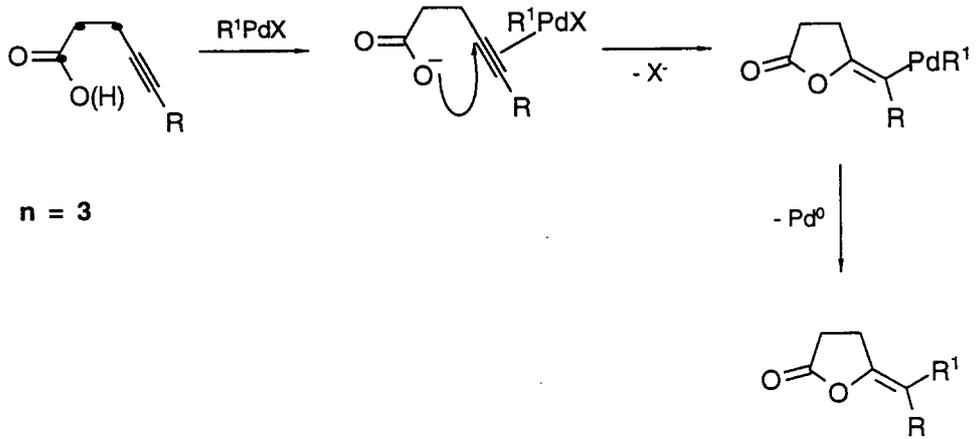
# Coupling/Cyclization



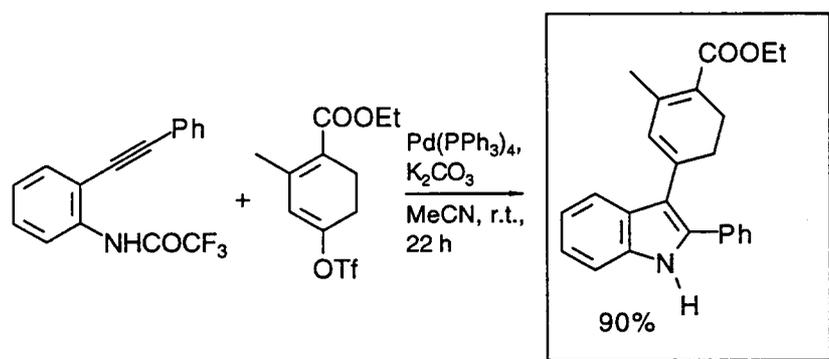
# Cyclizations through Oxy- and Aminopalladation/Reductive Elimination with Organopalladium Derivatives





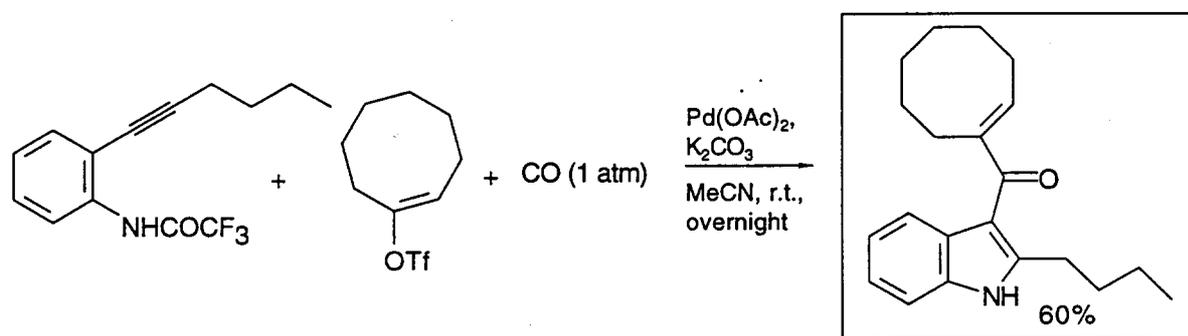


### Synthesis of 2,3-Disubstituted Indoles



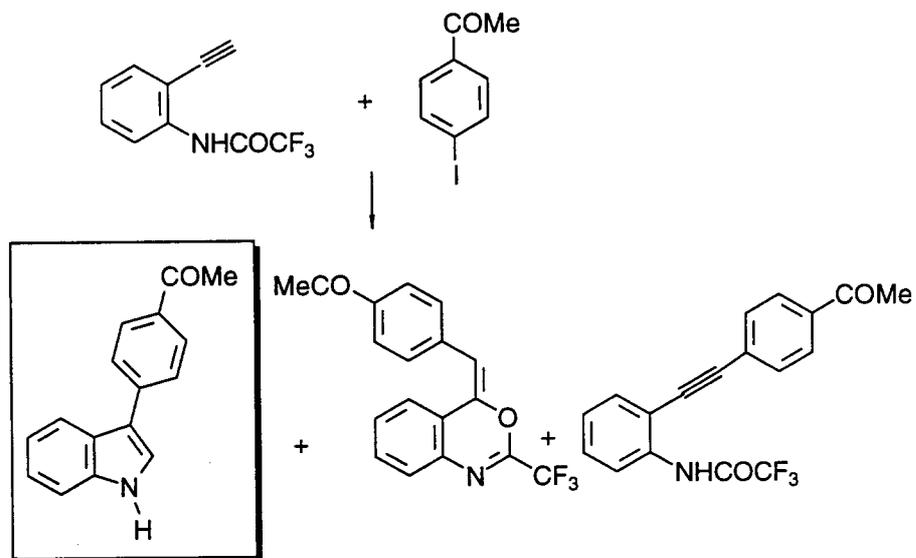
Arcadi, A.; Cacchi, S.; Marinelli, F.  
*Tetrahedron Lett.* 1992, 33, 3915

### Synthesis of 2-Substituted-3-acylindoles



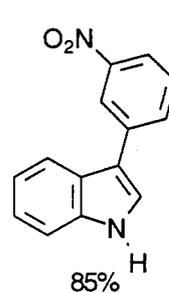
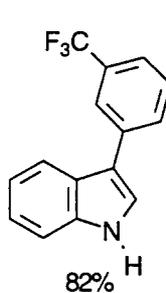
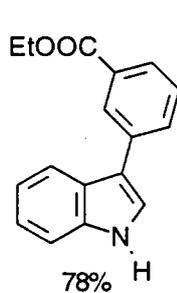
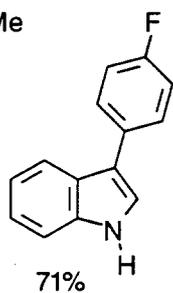
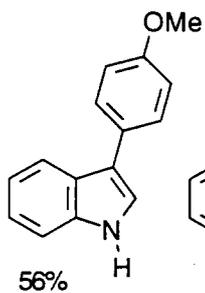
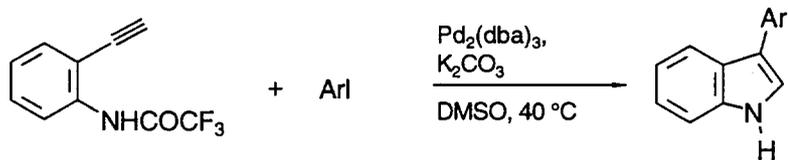
Arcadi, A.; Cacchi, S.; Carnicelli, V.; Marinelli, F. *Tetrahedron* 1994, 50, 437

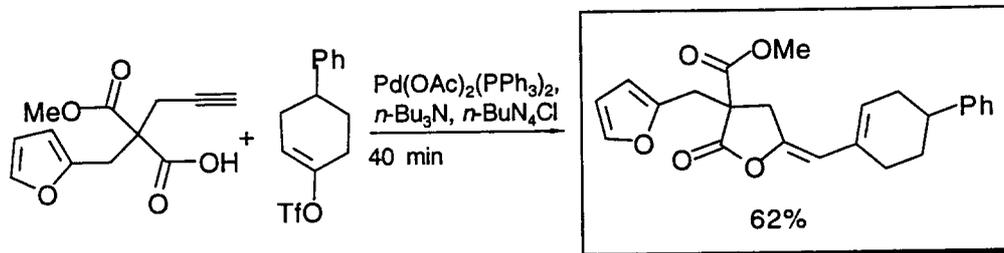
## Synthesis of 3-Substituted Indoles



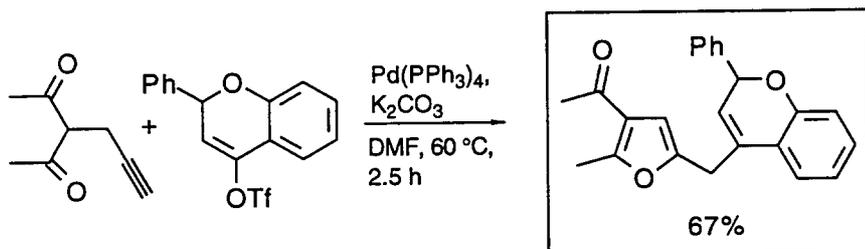
Pd(PPh <sub>3</sub> ) <sub>4</sub> / MeCN/ 80 °C	23%	-	37%
Pd <sub>2</sub> (dba) <sub>3</sub> /PPh <sub>3</sub> / THF/60 °C	25%	36%	23%
Pd <sub>2</sub> (dba) <sub>3</sub> /tris( <i>p</i> -Cl-C <sub>6</sub> H <sub>4</sub> ) <sub>3</sub> P/THF, 60 °C	-	-	83%
Pd <sub>2</sub> (dba) <sub>3</sub> /DMSO/40 °C	64%	17%	8%

Cacchi, S.; Fabrizi, G.; Marinelli, F.; Moro, L.; Pace, P. *Synlett* 1997, 1363

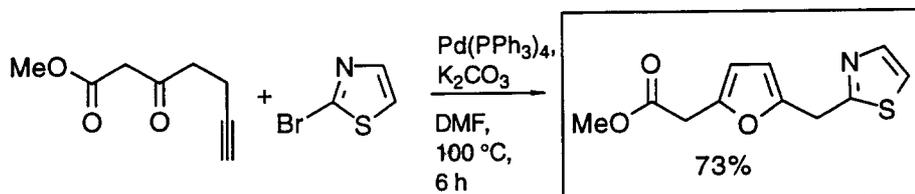




Arcadi, A.; Burini, A.;  
 Cacchi, S.; Delmastro, M.;  
 Marinelli, F.; Pietroni, B.R.  
*J. Org. Chem.*  
 1992, 57, 976

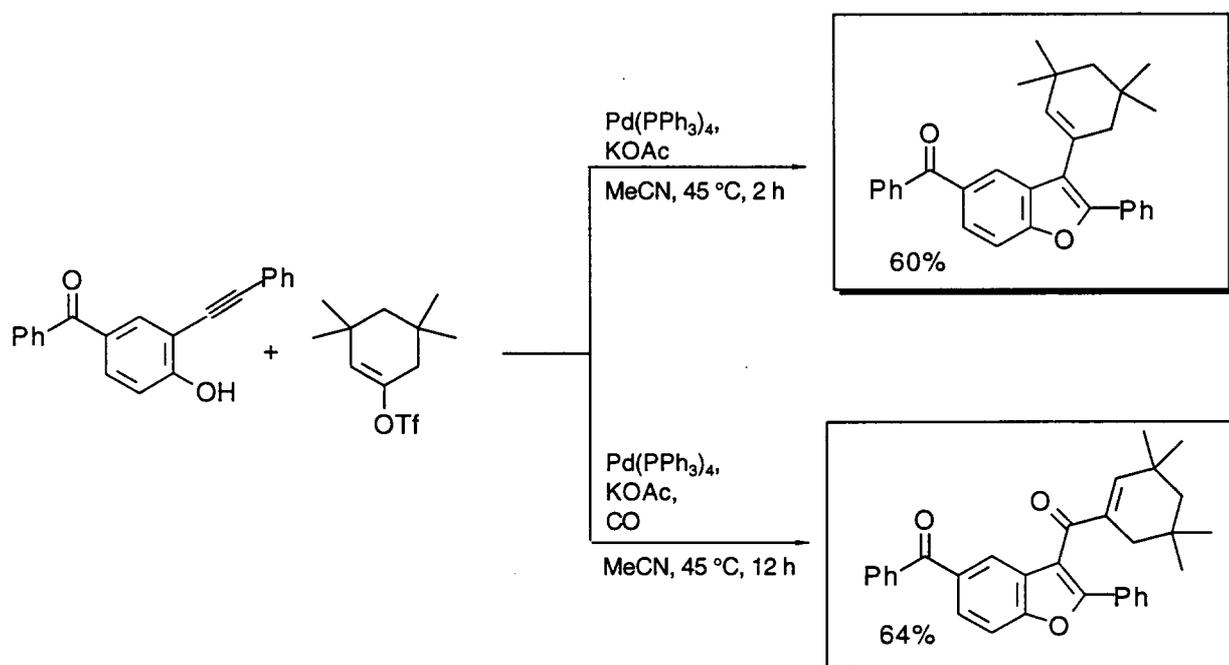


Arcadi, A.; Cacchi, S.; Larock, R.C.;  
 Marinelli, F.  
*Tetrahedron Lett.* 1993, 34, 2813



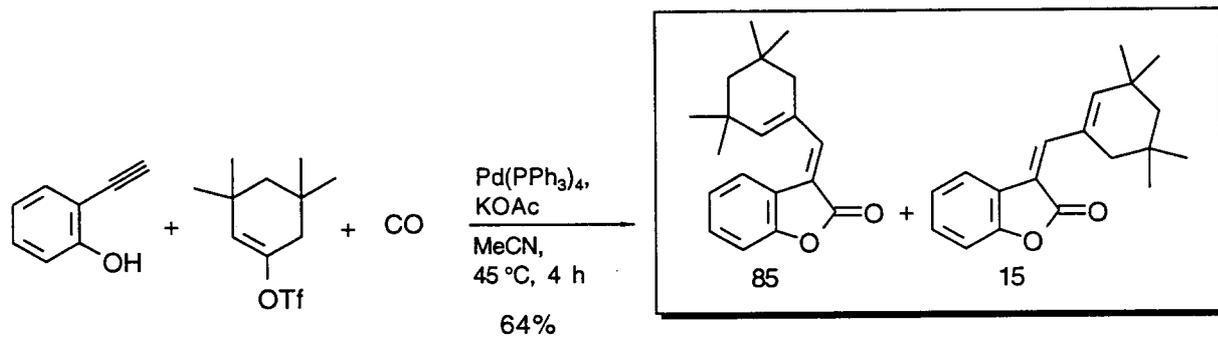
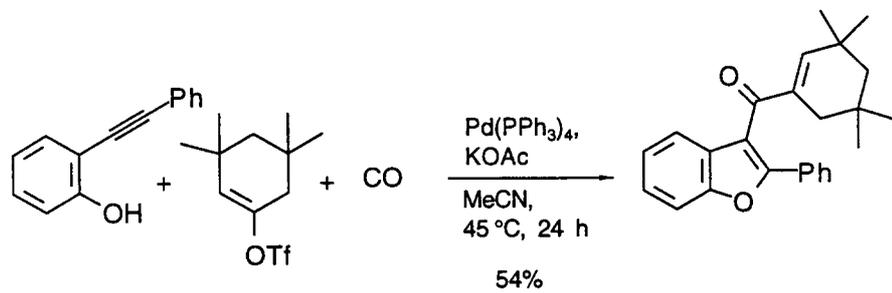
Cacchi, S.; Fabrizi, G.; Moro, L.  
*J. Org. Chem.* 1997, 62, 5327

# Synthesis of 2,3-Disubstituted- and 2-Substituted-3-acylbenzo[*b*]furans

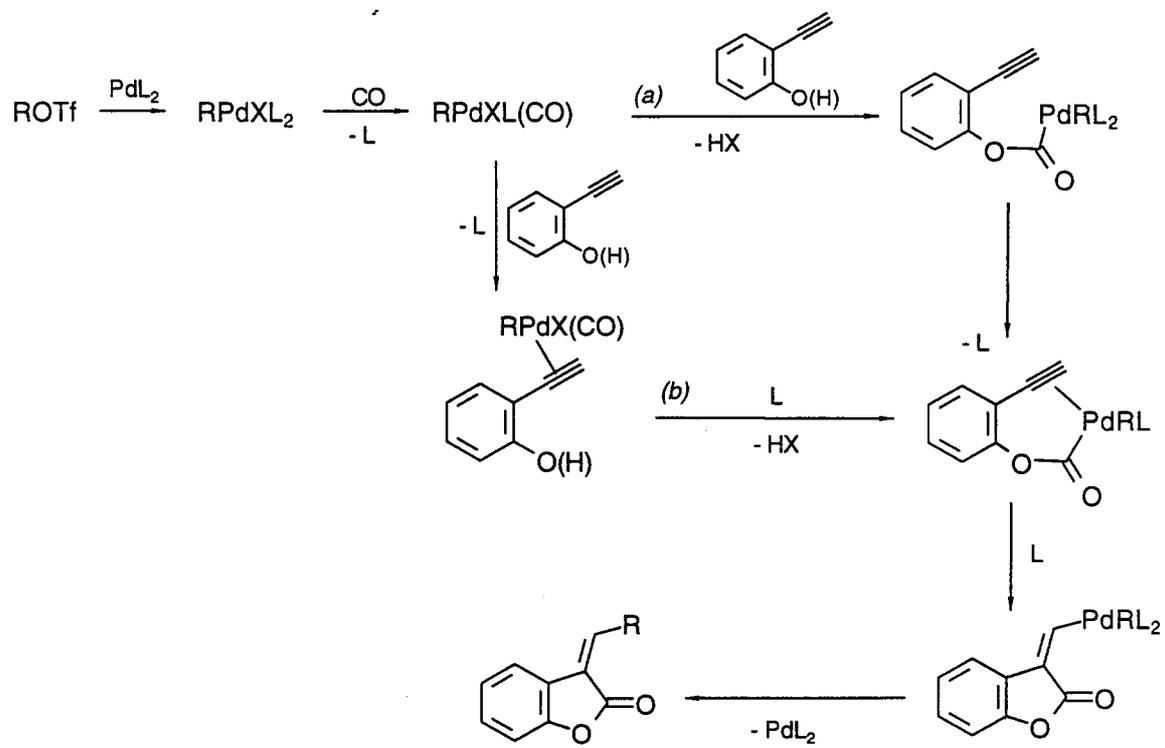


Arcadi, A.; Cacchi, S.; Del Rosario, M.; Marinelli, F. *J. Org. Chem.* **1996**, *61*, 9280

## Synthesis of Coumaranones

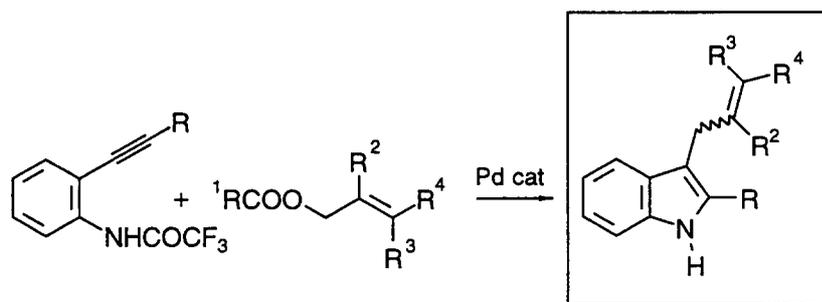


Arcadi, A.; Cacchi, S.; Fabrizi, G.; Moro, L.



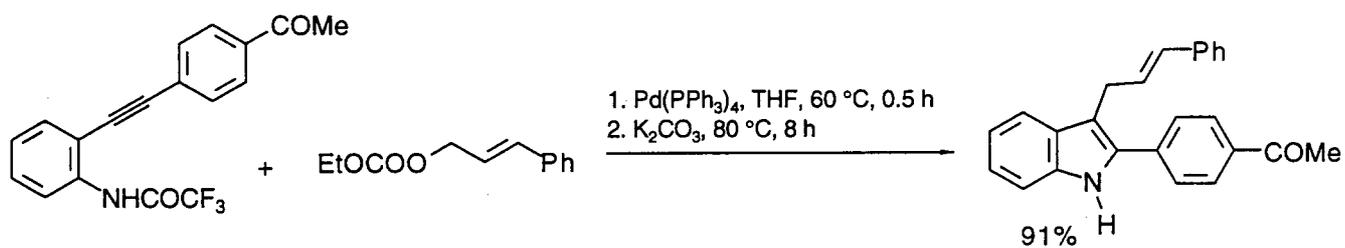
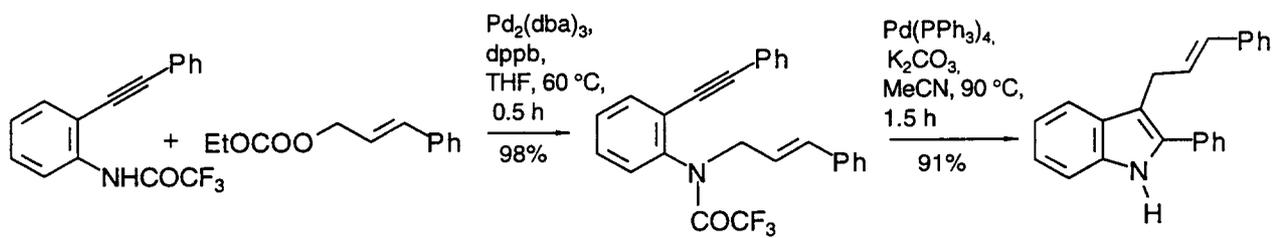
X = OTf or OAc (in the presence of KOAc)

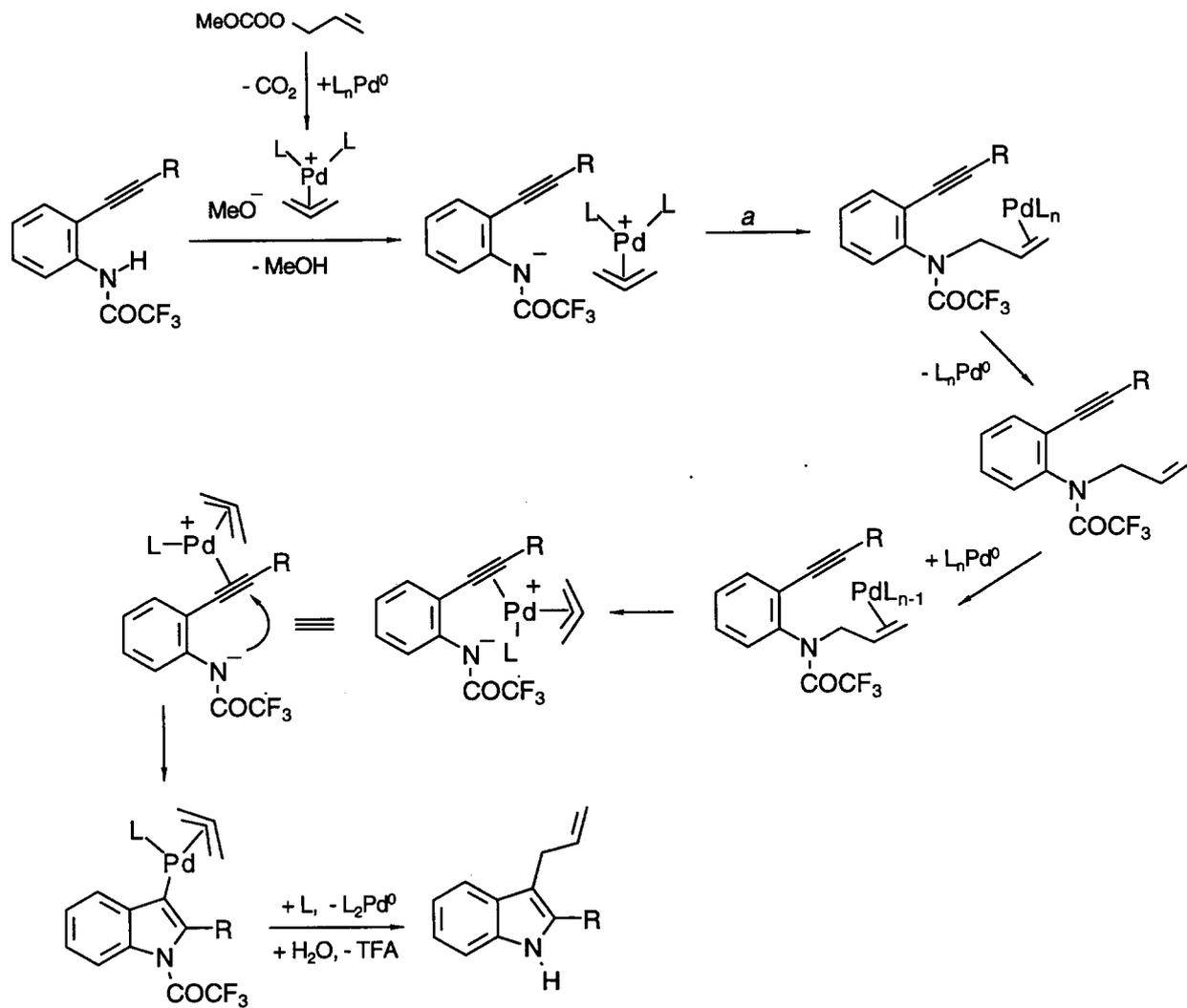
## Synthesis of 3-Allylindoles

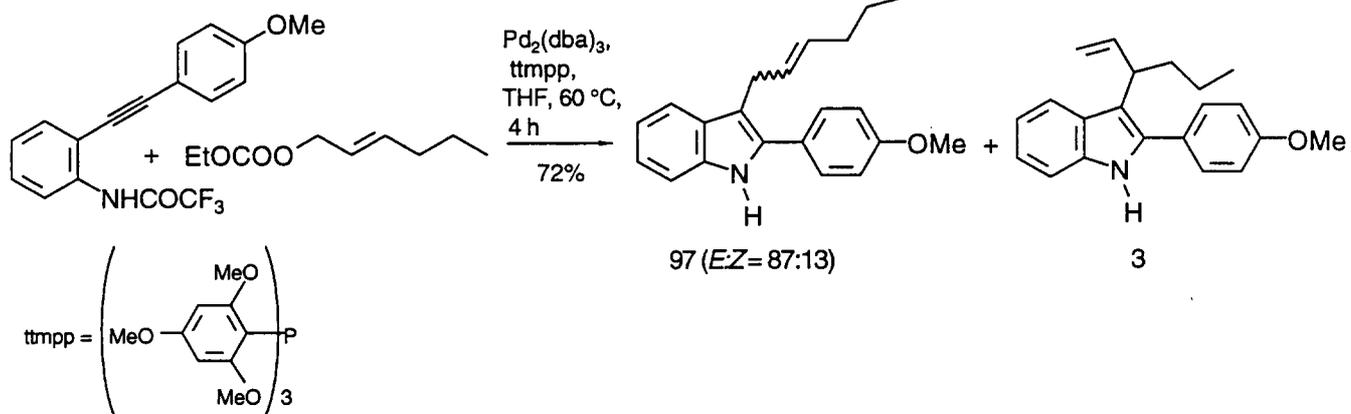


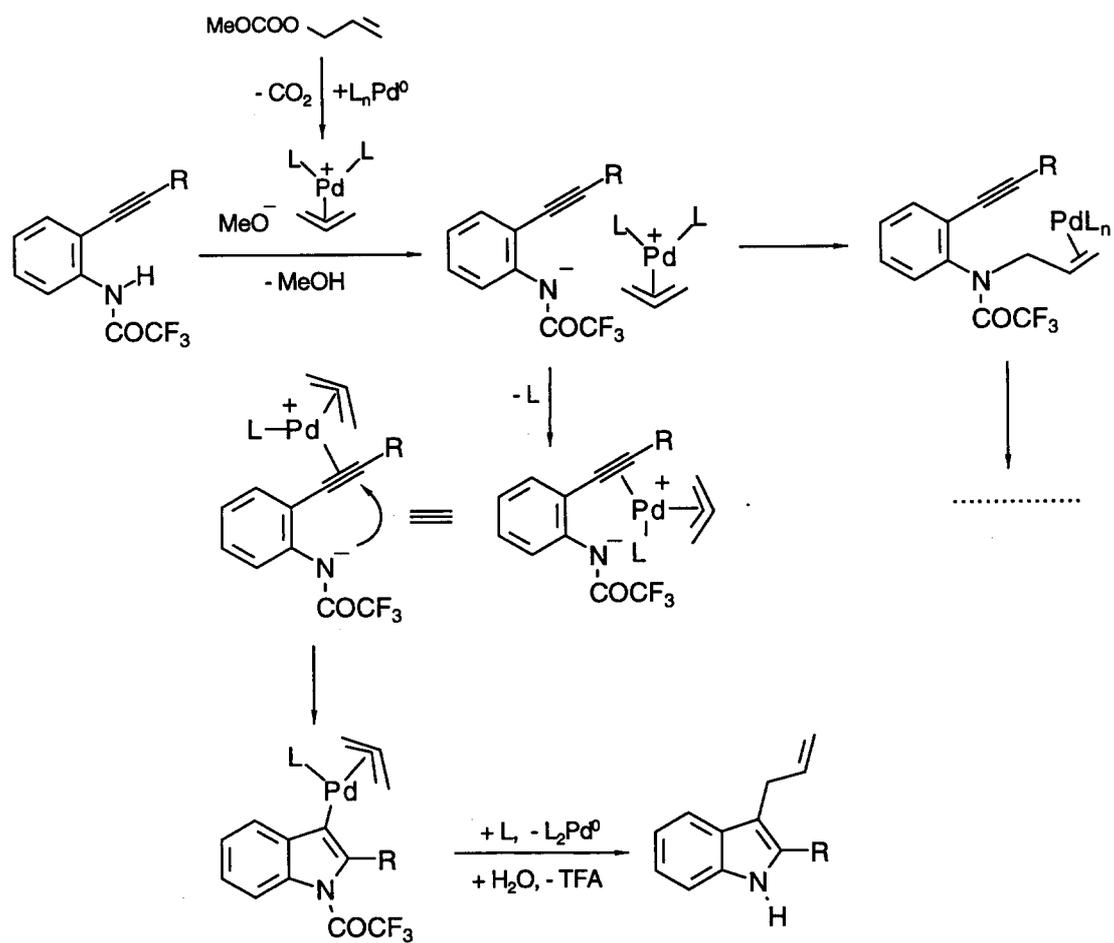
$\text{R}^1 = \text{Me, EtO, MeO}$

Cacchi, S.; Fabrizi, G.; Pace, P. *J. Org. Chem.* **1998**, *63*, 1001

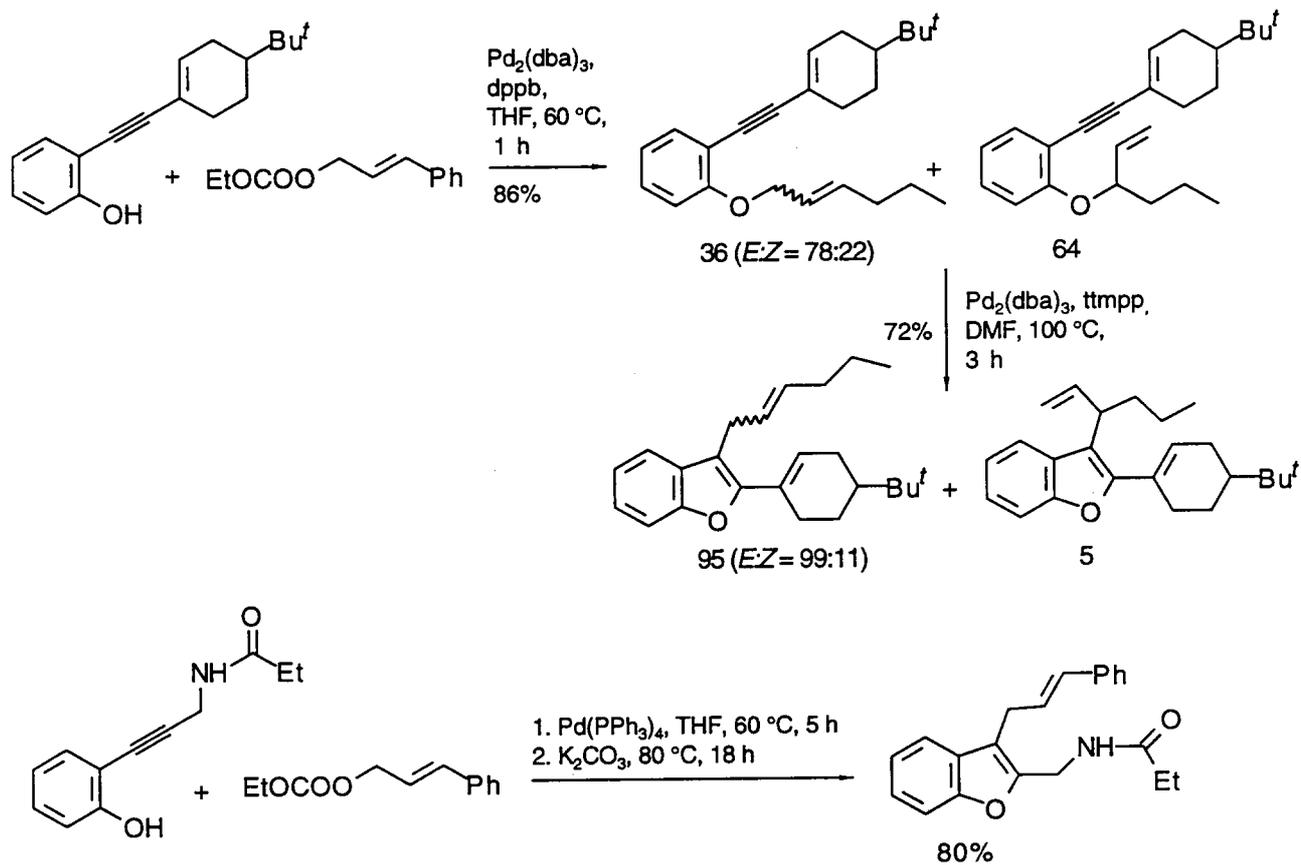






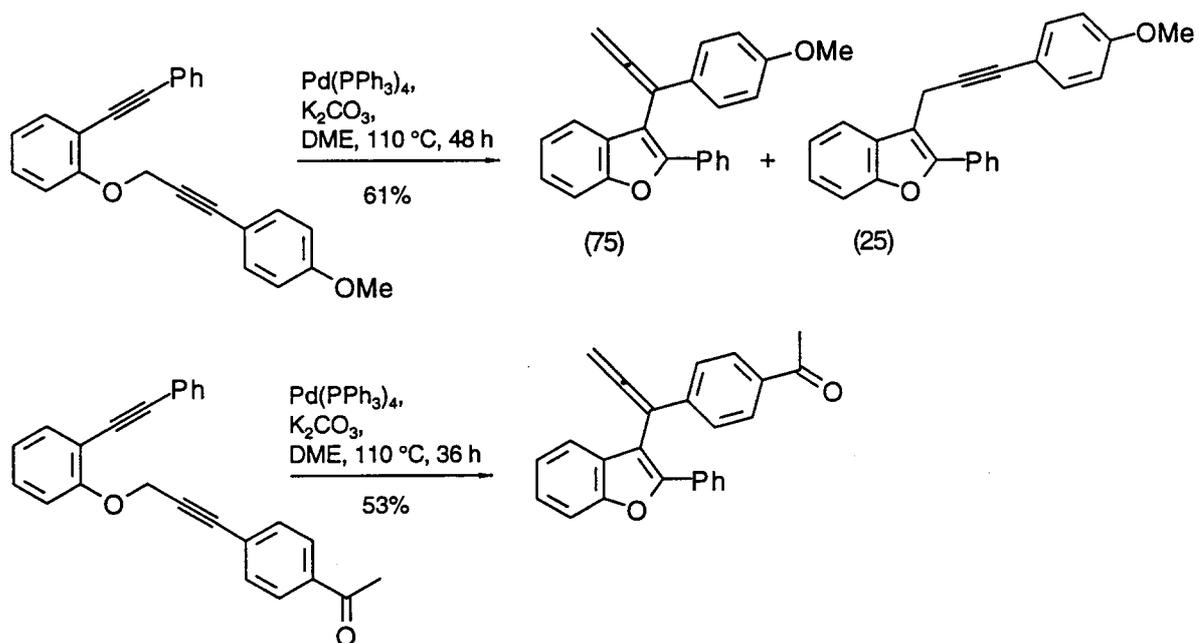


### Synthesis of 2-Substituted-3-allylbenzo[*b*]furans



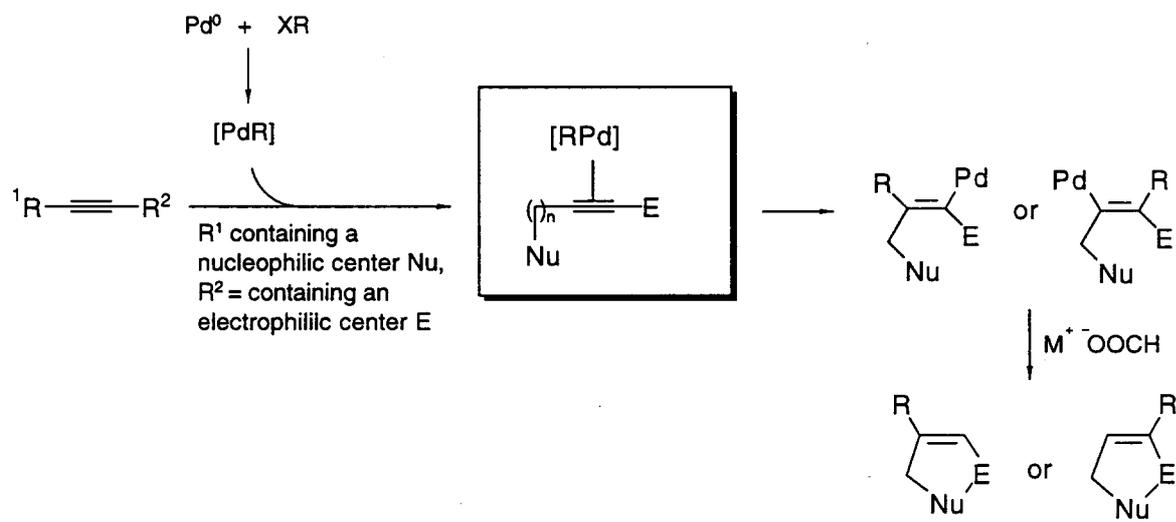
Cacchi, S.; Fabrizi, G.; Moro, L. *Synlett* 1998, 741

## Synthesis of 2-Substituted-3-allenylbenzo[b]furans

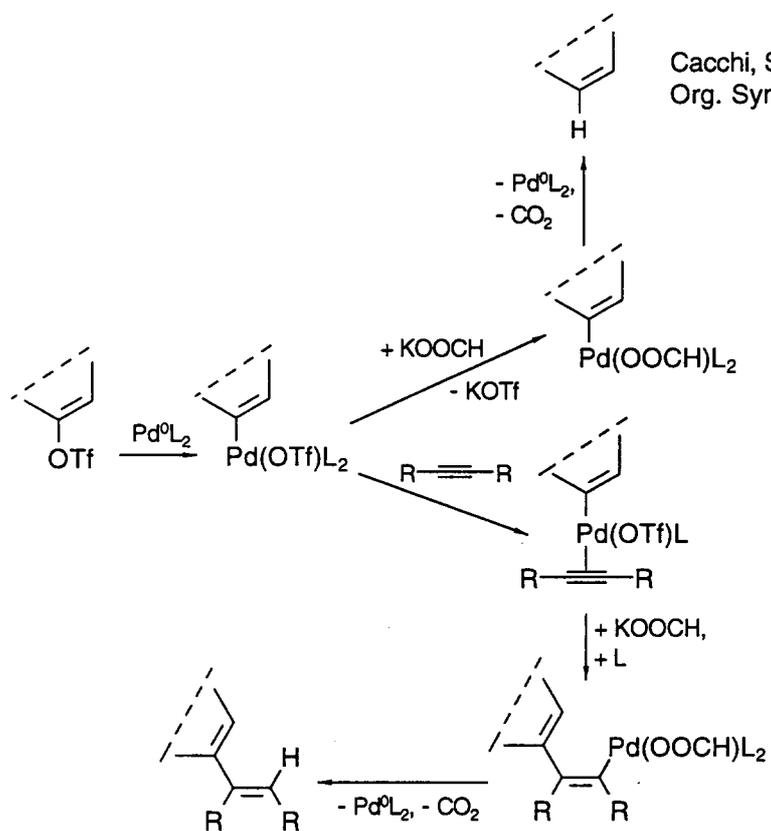


Cacchi, S.; Fabrizi, G.; Moro, L. *Tetrahedron Lett.* **1998**, *39*, 5101

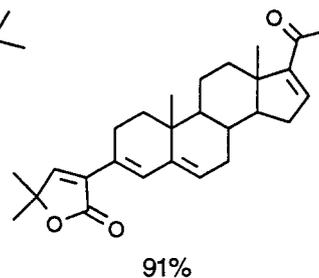
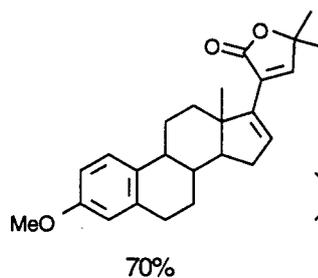
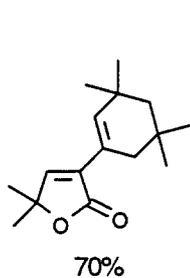
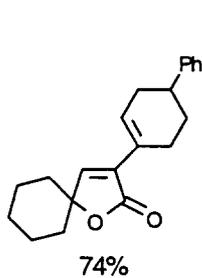
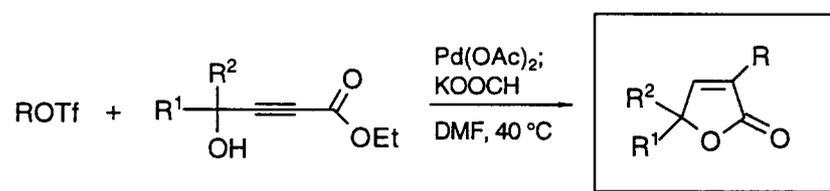
# Hydroarylation(Hydrovinylation)/Cyclization



Cacchi, S.; Morera, E.; Ortar, G  
Org. Synth. (1990), 68, 138

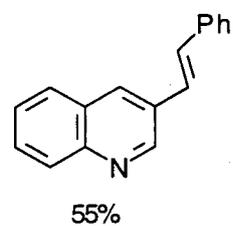
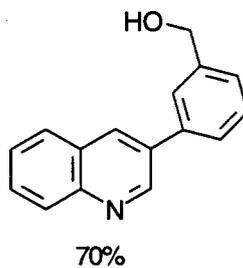
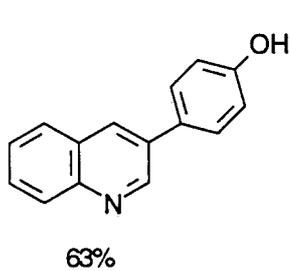
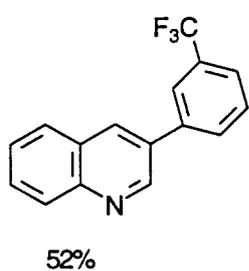
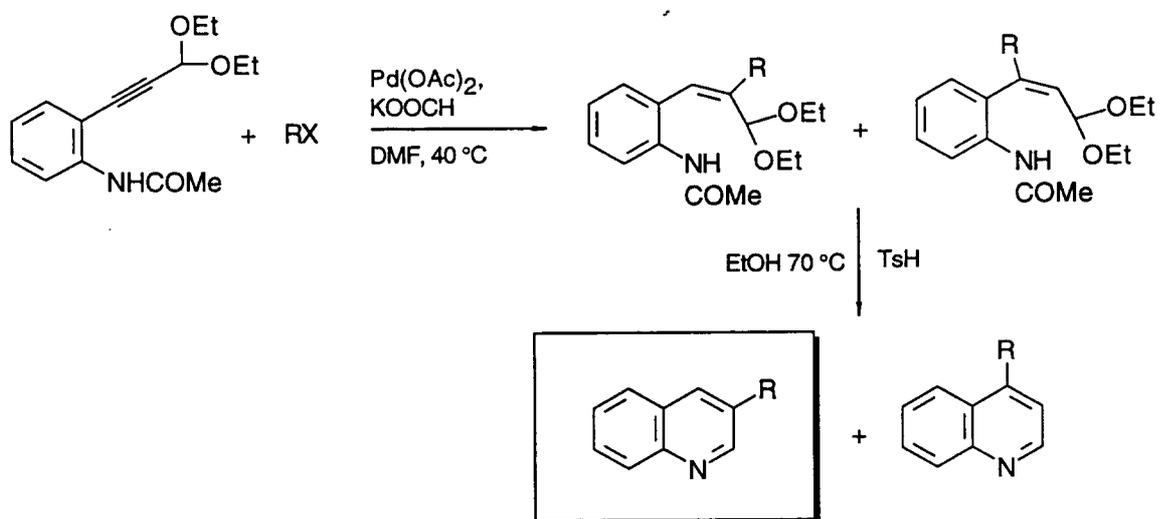


## Synthesis of 2-Vinylbutenolides



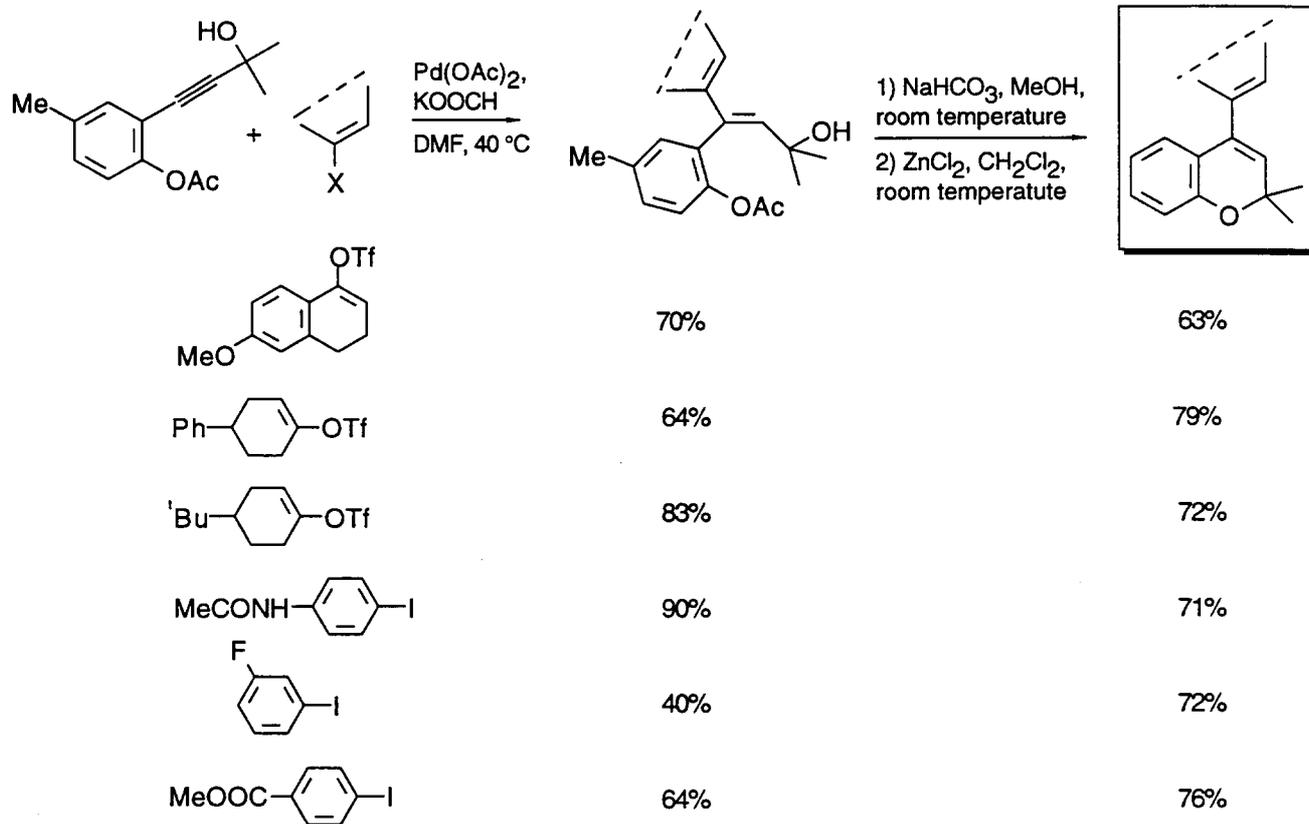
Cacchi, S.; Fabrizi, G.; Marinelli, F.; Pace, P.

## Synthesis of Quinolines



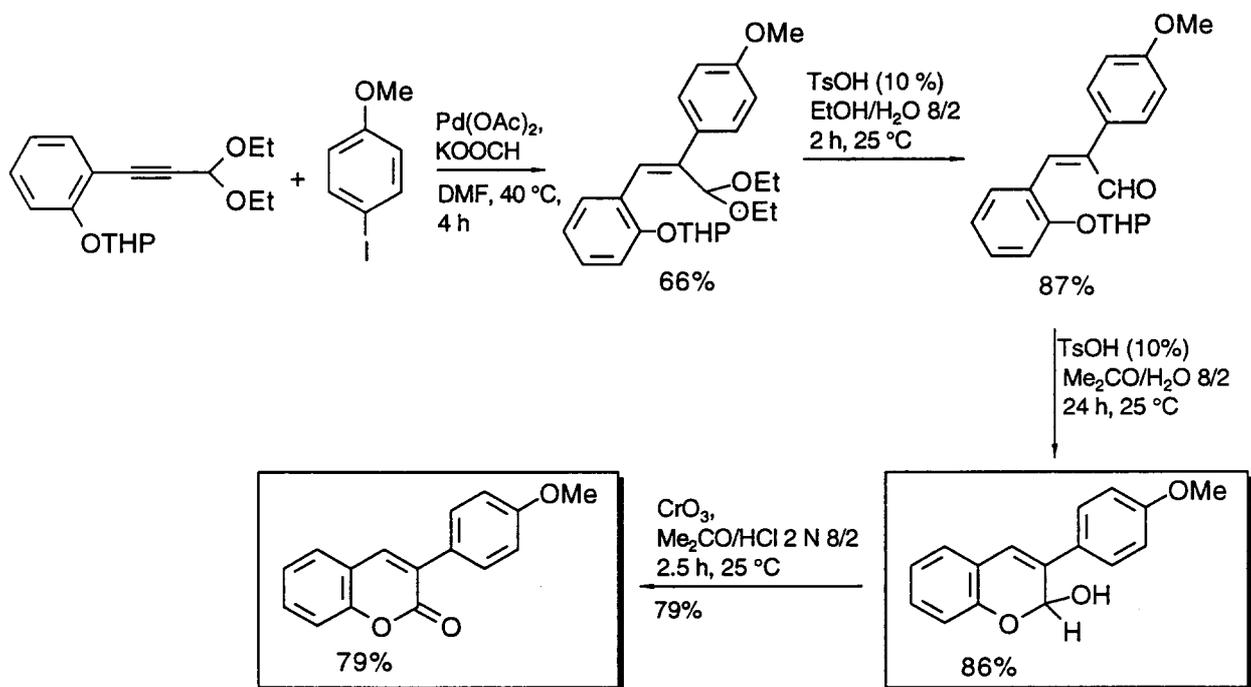
Cacchi, S.; Fabrizi, G.; Marinelli, F.; Moro, L.; Pace, P. *Tetrahedron* 1996, 52, 10225

## Synthesis of Precocenes



Cacchi, S.; Fabrizi, G.; Marinelli, F.; Pace, P.

## Synthesis of Cromanols and Coumarins



Cacchi, S.; Fabrizi, G.; Moro, L.; Pace, P. *Synlett* 1997, 1367

