



## Cycloaddition reactions

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Chemoselectivities in the Platinum-Catalyzed Hydrative Carbocyclizations of Oxo-Alkyne-Nitrile Functionalities. — Various nitrogen-containing heterocycles are prepared with the title method. An alternative synthetic application enables the preparation of spiro azacycles. — (MUKHERJEE, A.; LIU\*, R.-S.; Org. Lett. 13 (2011) 4, 660-663, http://dx.doi.org/10.1021/o11029047; Dep. Chem., Natl. Tsing Hua Univ., Hsinchu 30013, Taiwan; Eng.) — H. Simon

A): 5 equiv. H<sub>2</sub>O, 15 mol% PtCl<sub>2</sub>/CO (cat.), dioxane, 80°C

CHO CN 
$$\frac{A}{[-> a] [7 h]}$$
  $VI$   $Z$   $a Z: -CH_2 - 78%$   $b Z: -(CH_2)_3 - 83%$ 

VII

VIII 61%

IIIc 
$$\xrightarrow{1. B)}$$
 OO CN D  $\xrightarrow{D}$   $\xrightarrow{H}$  O  $\xrightarrow{N}$   $\xrightarrow{N}$   $\xrightarrow{N}$  98%

B): 5 equiv.  $H_2O$ , 5 mol%  $[PtCl_2(C_2H_4)]_2/CO$  (cat.), dioxane, 80°C, [2 h]

C): DBU, 10 mol% PTAC (cat.),  $CH_2Cl_2$ , 25°C, [up to 3 h]

D): 2 equiv. TfOH, toluene, 70°C, [3 h]



