

# Zinc-Catalyzed Alkynylation with Terminal Ynamides

Category

**Metal-Catalyzed Asymmetric Synthesis and Stereoselective Reactions**

Key words

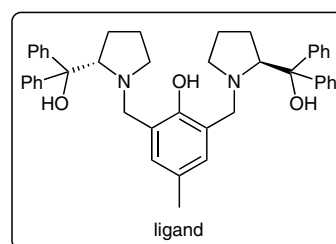
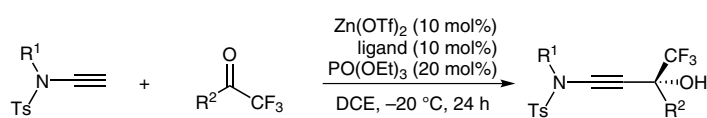
zinc catalysis

alkynylation

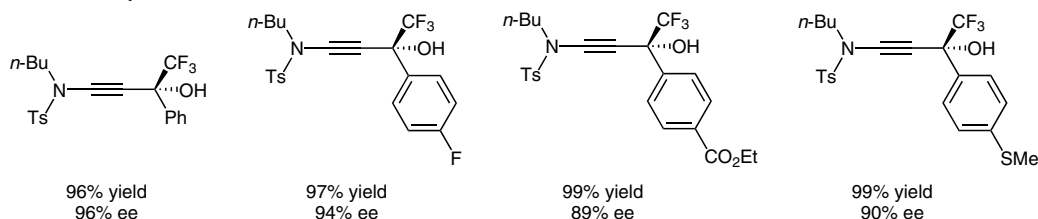
ynamides

trifluoromethyl compounds

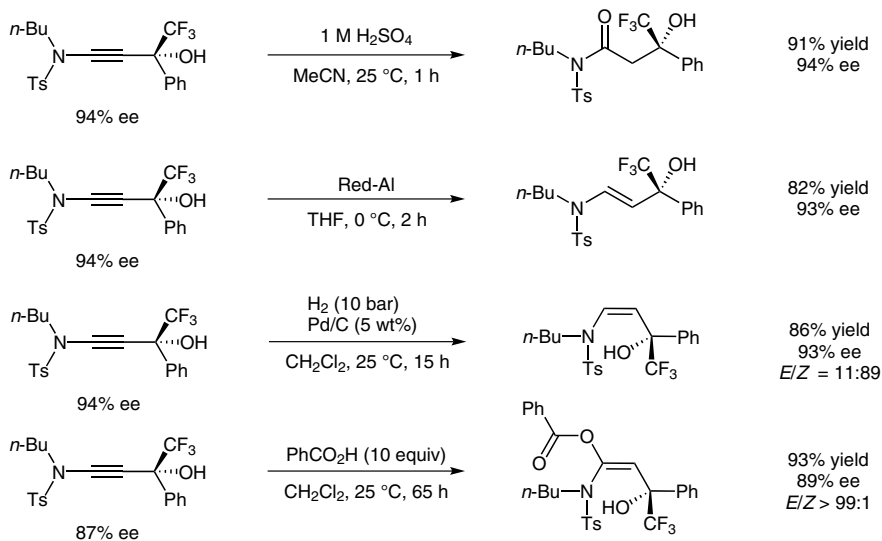
propargylic alcohols



## Selected examples:



## Transformation of ynamides:



**Significance:** Propargylic alcohols with an  $\alpha$ -trifluoromethyl group are an important motif in pharmaceutical compounds. Zinc-catalyzed asymmetric addition of ynamides to trifluoromethyl ketones affords the corresponding adducts in high yields.

**Comment:** The bis(prolinol)phenol ligand permits this reaction to be performed with high enantioselectivity. Triethyl phosphate was added to increase catalyst turnover. Various transformations of the alkynylated products are also demonstrated.