B. YE, N. CRAMER\* (ÉCOLE POLYTECHNIQUE FÉDÉRALE DE LAUSANNE, SWITZERLAND) A Tunable Class of Chiral Cp Ligands for Enantioselective Rhodium(III)-Catalyzed C-H Allylations of Benzamides *J. Am. Chem. Soc.* **2013**, *135*, 636–639.

# **Chiral Cyclopentadiene Ligands for the Asymmetric Allylation of Benzamides**

 $R^1$  = H, Me, CF<sub>3</sub>, Cl, Br, OMe

 $R^2 = CH_2CH_2OMe$ ,  $CH_2CH_2OH$ ,  $CH_2OTIPS$ ,  $CH_2CO_2Et$ , Ph, Bu

 $R^3 = Me, Cy$ 

16 examples up to 91% yield er up to 99:1 0.1 mmol scale

# Selected examples:

# Synthesis of the catalyst:

**Significance:** A class of chiral Cp ligands with tuneable steric parameters is reported and used in the Rh(III)-catalyzed allylation of *N*-methoxybenzamides. The obtained yields are good and the enantioselectivities excellent.

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**Comment:** Cyclopentadienyl (Cp) ligands are among the most versatile and frequently used ligands to access robust and highly catalytically active transition-metal complexes. However, there are only a few chiral Cp ligands reported so far.

## Category

Metal-Catalyzed Asymmetric Synthesis and Stereoselective Reactions

## **Key words**

cyclopentadiene

C-H allylation

rhodium(III)

benzamides

