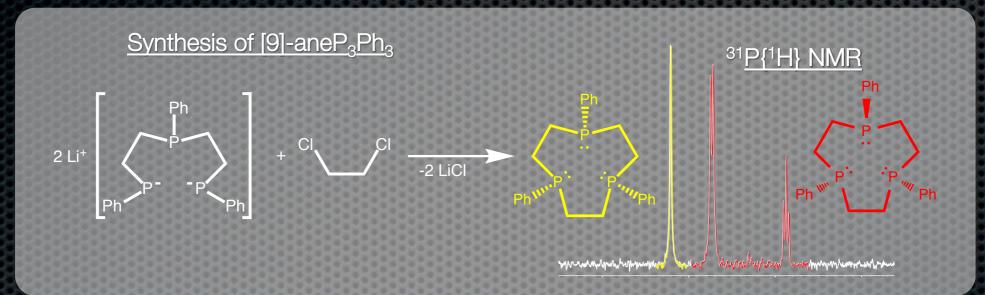
## Multidentate cyclic phosphines: Synthesis of the novel 1,4,7-triphosphacyclone and linear alpha olefin catalysis studies using 1,4-diphosphacyclohexane

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Synthesis of the [9]-aneP<sub>3</sub>Ph<sub>3</sub> ligand was optimized for solvent selection and reagent concentrations

Synthesis of two novel chromium(III) complex with the [6]-aneP<sub>2</sub>Ph<sub>2</sub> ligand was accomplished

$$Cr(THF)_3Cl_3$$
+
 $Ph-P$ :: P-Ph

 $Ph$ 
 $Cl$ 
 $Cr$ 
 $Cr$ 
 $THF$ 
 $Cl$ 
 $Ph$ 
 $Cl$ 
 $Ph$ 

$$\begin{array}{c} 2 \operatorname{Cr}(\operatorname{THF})_3\operatorname{Cl}_3 \\ + \\ \operatorname{Ph}-\operatorname{P}: \\ :\operatorname{P}-\operatorname{Ph} \end{array} \begin{array}{c} \operatorname{Ph} \\ \operatorname{Cl} \\ \operatorname{Cl} \\ \operatorname{Ph} \end{array} \begin{array}{c} \operatorname{Ph} \\ \operatorname{Cl} \\ \operatorname{Cl} \\ \operatorname{Ph} \end{array}$$

These complexes were used to carry out preliminary studies on the catalytic formation of linear alpha olefins from ethylene