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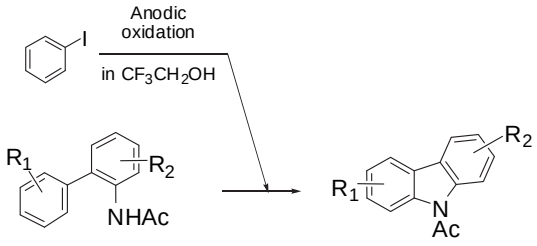
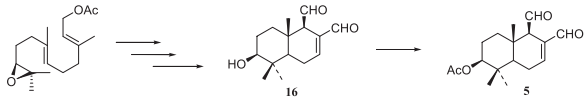
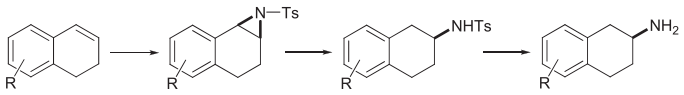
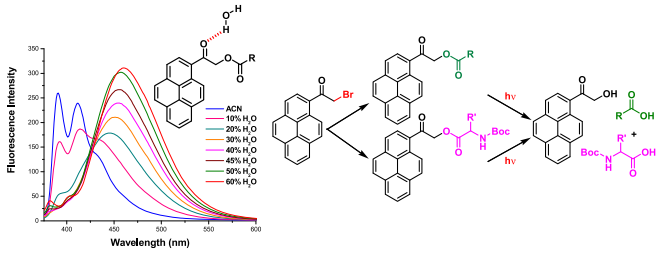
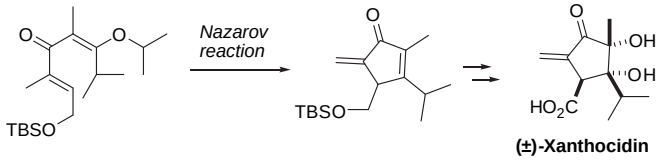
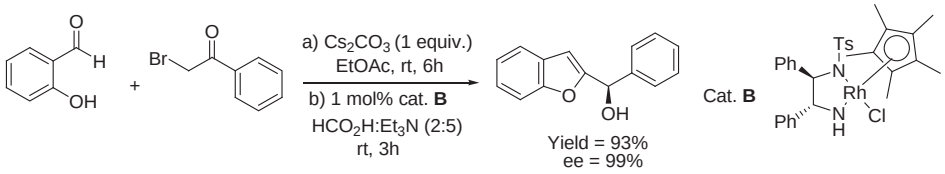




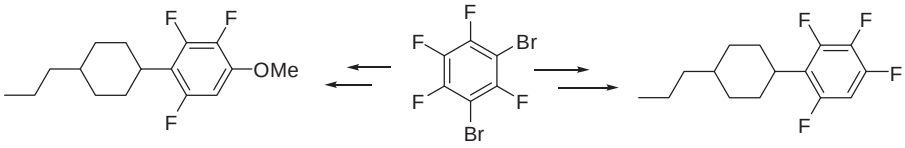


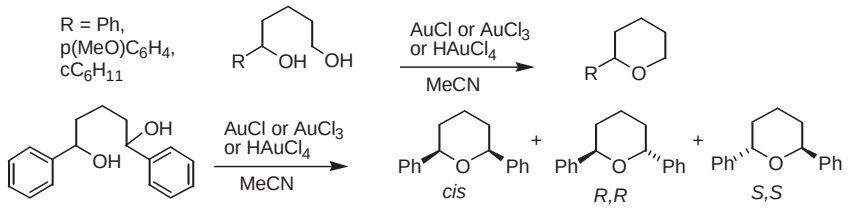


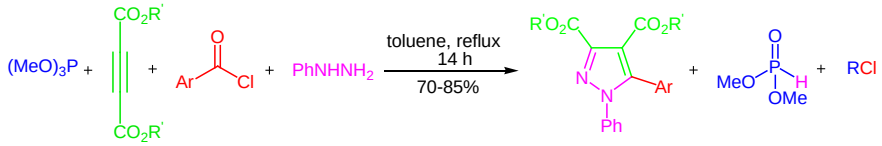




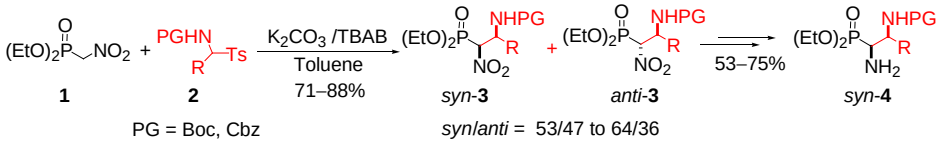
A key feature of this protocol is synthesis of enantioenriched substituted (benzofuran-yl)- aryl and heteroaryl carbinols via a Rap-Stoermer reaction/catalytic asymmetric transfer hydrogenation (ATH) using substituted salicylaldehyde and α-haloaryl, hetero aryl ketones.

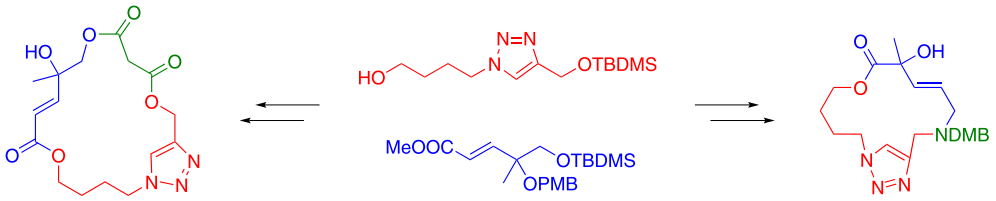


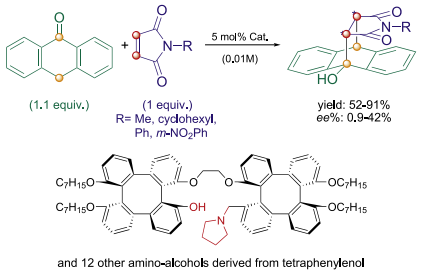


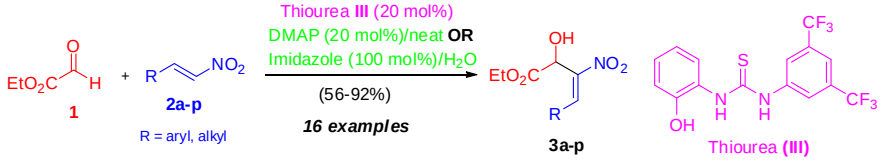


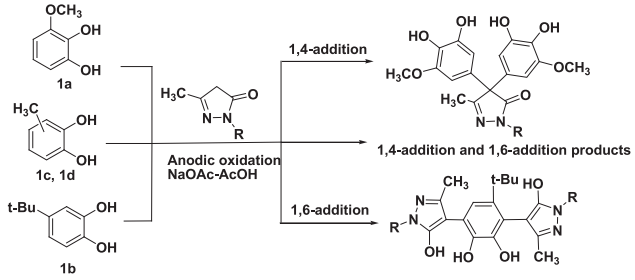
A facile and direct synthetic entry to dialkyl 5-(aryl)-1-phenyl-1*H*-prazole-3,4-dicarboxylate via a one-pot, four-component reaction of trimethyl phosphite, acetylenic ester, and aroyl chlorides, and phenylhydrazine under reflux conditions in dry toluene is reported.



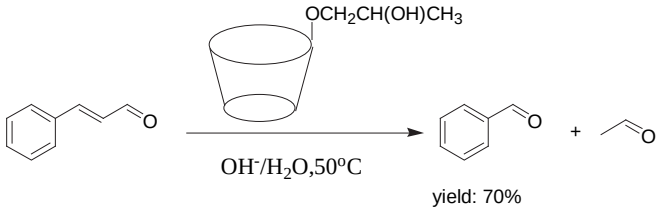




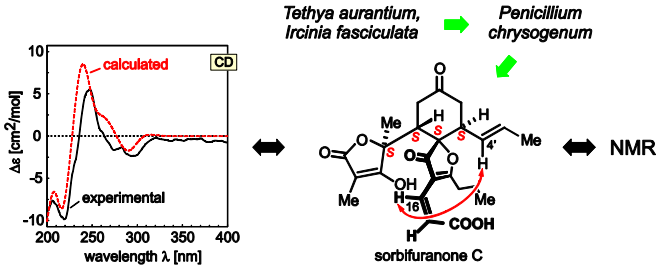


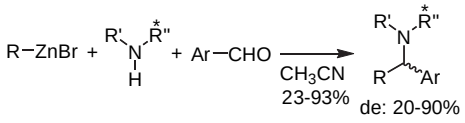


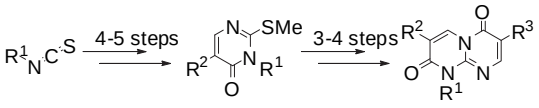
1,4-addition or 1,6-addition of pyrazol-5-ones to electrochemically-generated *o*-benzoquinones? The nature of the starting catechols plays a predominant role!

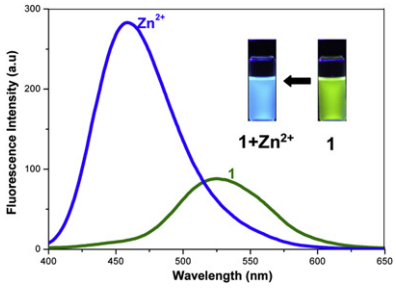


Owing to the strong binding ability between 2-hydroxypropyl-β-cyclodextrin (2-HPβ-CD) and substrate, 2-HPβ-CD can efficiently catalyze the alkaline hydrolysis of cinnamaldehyde to benzaldehyde under rather mild conditions (50 °C, ambient atmosphere), and the yield of benzaldehyde could reach 70% under such mild conditions.

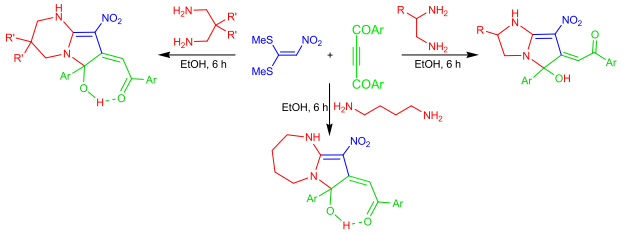


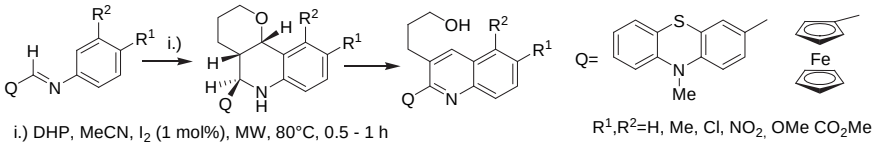


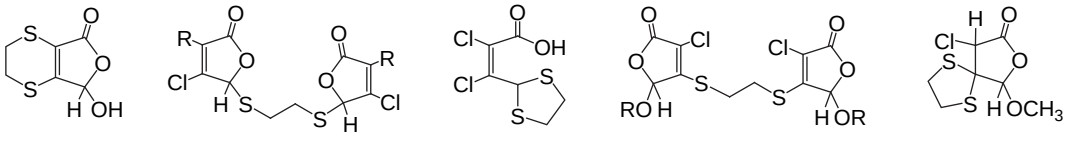


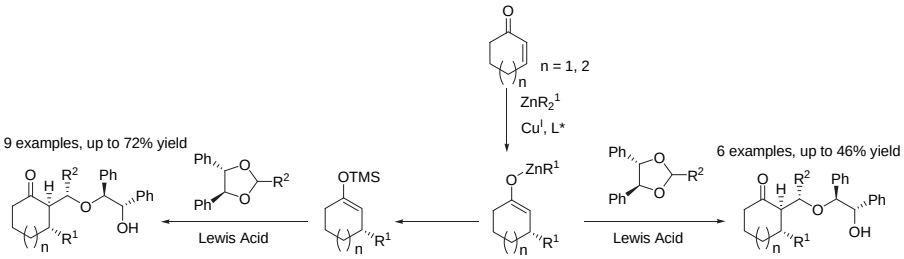


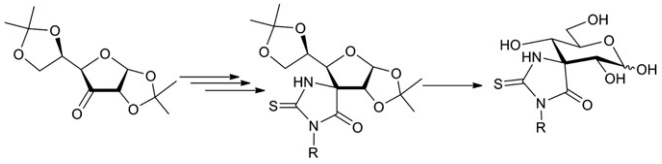
The chemosensor (TTP, **1**) shows a highly selective fluorescence enhancement with Zn^{2+} in aqueous ethanol system.

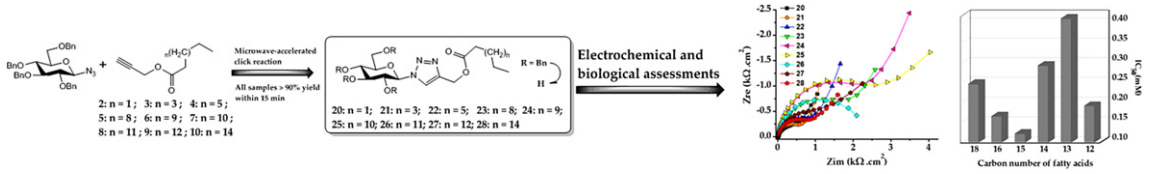


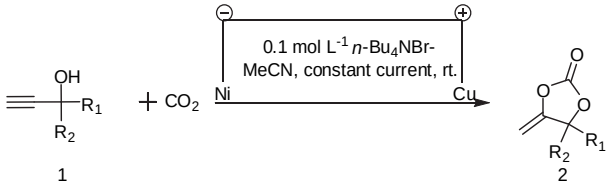








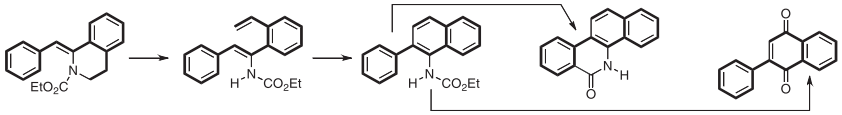


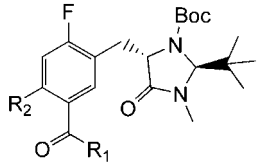


1

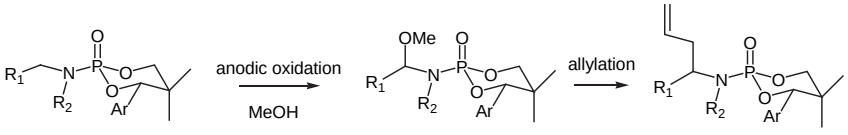
1a. $R_1 = CH_3$, $R_2 = Ph$; 1b. $R_1 = CH_3$, $R_2 = CH_3$;
1c. $R_1 = CH_3$, $R_2 = CH_2CH_3$; 1d. $R_1 = CH_3$, $R_2 = CH_2CH(CH_3)_2$;
1e. $R_1 = CH_3$, $R_2 = CH_2(CH_2)_4CH_3$; 1f . $R_1,R_2 = -[CH_2]_4-$;
1g. $R_1,R_2 = -[CH_2]_5-$; 1h. $R_1 = H$, $R_2 = CH_2(CH_2)_3CH_3$.

2





1a R_1= H, R_2= OBn
1b R_1= CH_3, R_2= H
1c R_1= R_2= H



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