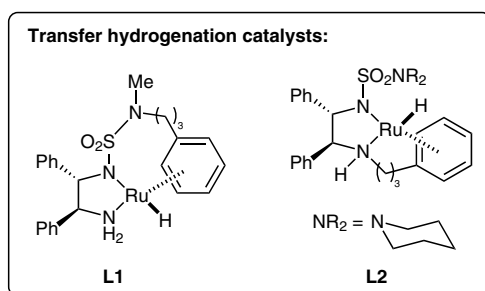
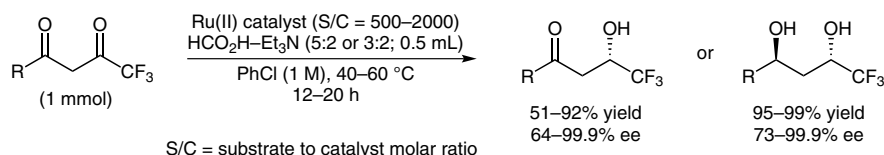


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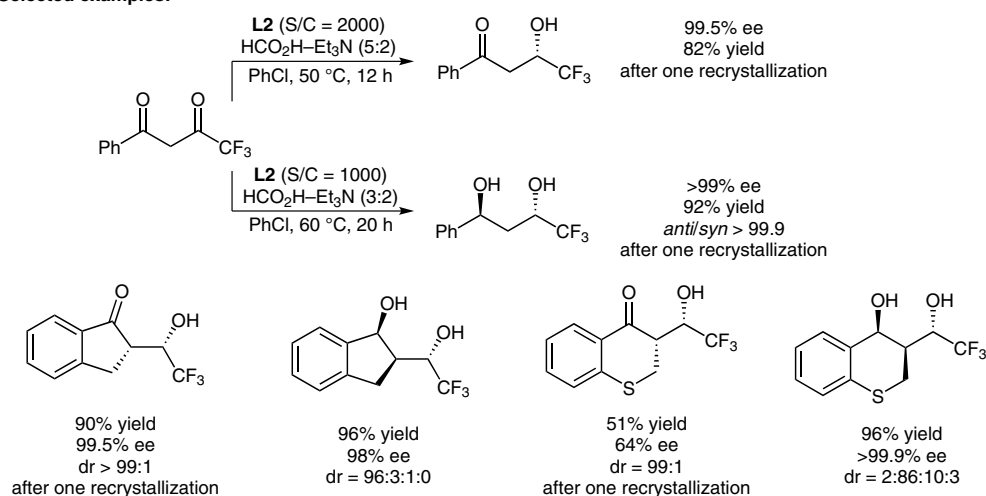
Stereoarrayed CF<sub>3</sub>-Substituted 1,3-Diols by Dynamic Kinetic Resolution: Ruthenium(II)-Catalyzed Asymmetric Transfer Hydrogenation

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# Ruthenium(II)-Catalyzed Asymmetric Transfer Hydrogenation Reaction



## Selected examples:



**Significance:** In this report, ruthenium-based transfer hydrogenation catalysts are described. The catalysts exhibit impressive turnover numbers with excellent enantioselectivities for the selective reduction of CF<sub>3</sub>-substituted 1,3-dicarbonyl compounds. The substrates include benzo-fused cyclic ketones which undergo reduction to furnish one stereoisomer.

**Comment:** Transfer hydrogenation (TH) reactions are milder and safer alternatives to metal-on-carbon-based hydrogenation reactions. Although the scope is usually limited to the reduction of carbonyls, TH avoids the use of highly pressurized systems. These reported ruthenium-based transfer hydrogenation catalysts are notable achievements in this field.

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