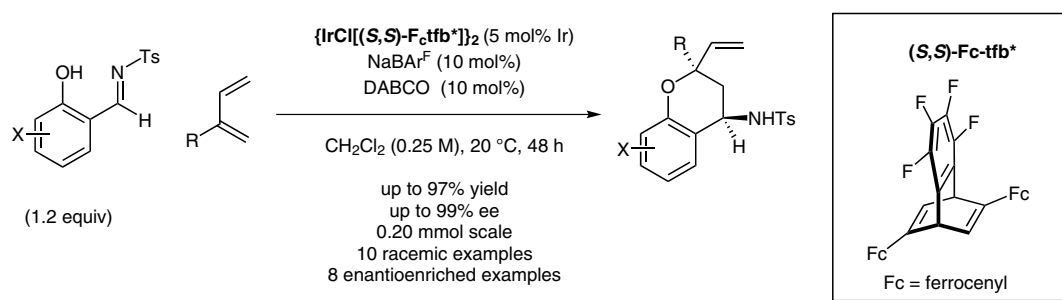
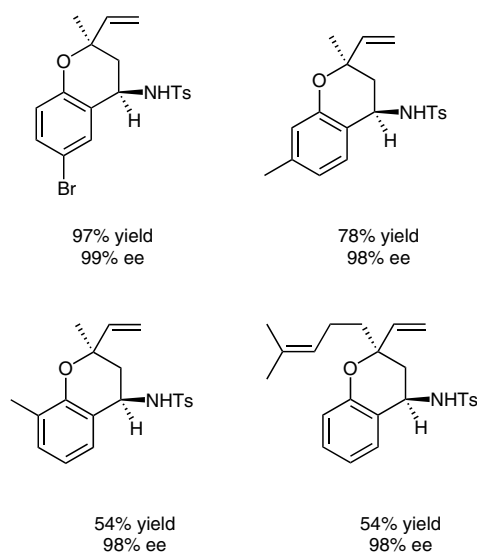


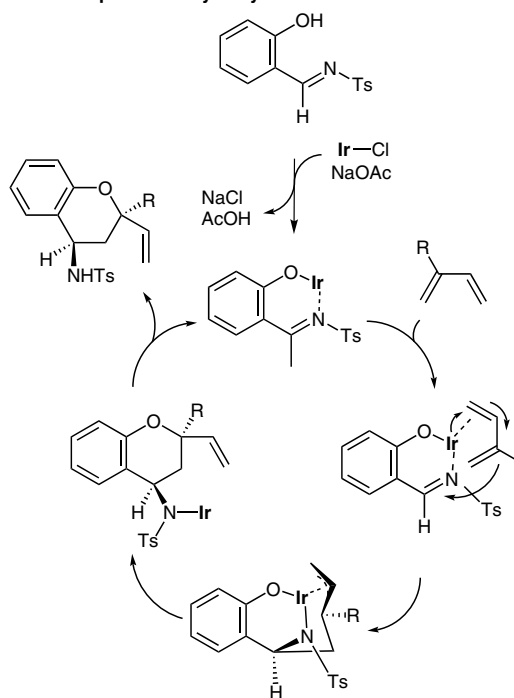
# Diastereo- and Enantioselective Iridium-Catalyzed Annulation of Salicylimines



### Selected examples:



### Proposed catalytic cycle:



**Significance:** Enantiomerically enriched 4-aminochromanes are a structurally unique and biologically important class of molecules. In this report the authors describe a novel annulation reaction of salicylimines with 1,3-dienes in the presence of an iridium catalyst. Utilizing a chiral diene ligand led to a highly enantioselective process.

**Comment:** Although the authors do not provide an explanation, a completely different set of conditions for the achiral examples was used (NaOAc as base, toluene as solvent, 80 °C instead of 20 °C and cyclooctene as achiral ligand). The proposed catalytic cycle includes the formation of a six-membered ring where the iridium center is coordinated to both oxygen and nitrogen. After oxidative cyclization and reductive elimination, the nitrogen–iridium bond is protonated to release the product and regenerate the catalyst.