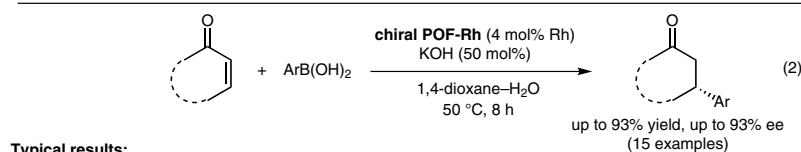
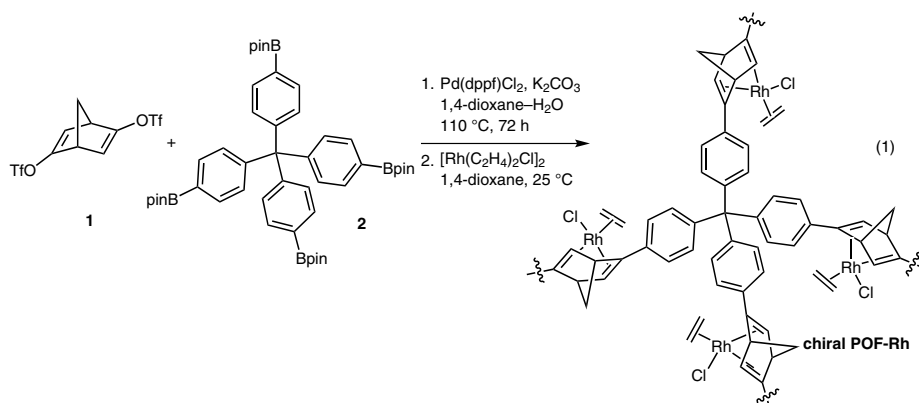
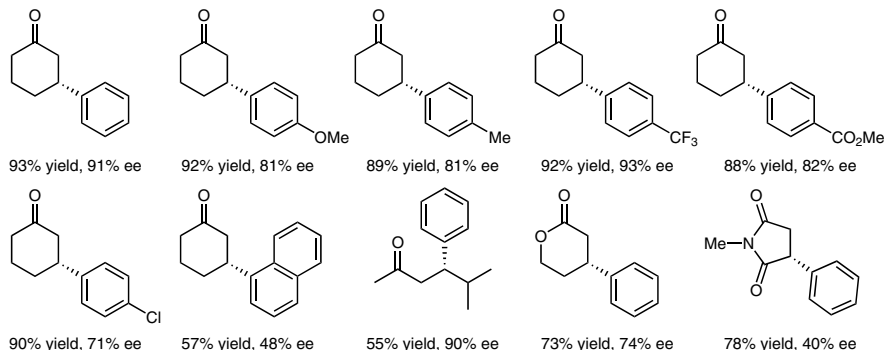


Asymmetric Conjugate Addition of ArB(OH)_2 to Enones with Chiral Rh-POF



Typical results:



Significance: A rhodium complex supported on a chiral porous organic framework (chiral POF-Rh) was prepared by the Suzuki–Miyaura coupling of chiral bistriflate **1** and **2**, followed by the complexation with $[\text{Rh}(\text{C}_2\text{H}_4)_2\text{Cl}]_2$ (eq 1). Chiral POF-Rh catalyzed the asymmetric conjugate addition of arylboronic acids to enones to give the corresponding 1,4-addition products in up to 93% yield with up to 93% ee (15 examples, eq. 2).

Comment: Chiral POF and chiral POF-Rh were characterized by NMR, BET, TEM, SEM, TGA, PXRD, and ICP analyses. In the reaction of phenylboronic acid with 2-cyclohexenone, chiral POF was recovered by centrifugation and reused by treatment with $[\text{Rh}(\text{C}_2\text{H}_4)_2\text{Cl}]_2$ without significant loss of activity and enantioselectivity (5th recycling run: 87% yield, 84% ee).