Enantioselective Hydrogenation of Imines Using Cooperative Catalysis

**Significance:** Optically active amines are common in many fine chemicals, agrochemicals, and pharmaceuticals. The authors report a cooperative metal-organo catalytic system utilizing a chiral Bronsted acid and an achiral iridium catalyst (see below for a Review on transfer hydrogenation).


**Comment:** The authors have reported the cooperative use of a chiral iridium catalyst with a chiral phosphoric acid in the asymmetric hydrogenation of acyclic imines with H2 (J. Am. Chem. Soc. 2008, 130, 14450). Here, they report an achiral iridium catalyst with a chiral phosphoric acid in a similar reaction. Alkyl imines, which are known to be difficult substrates for asymmetric hydrogenation, were shown to be excellent substrates in this system, giving enantioselectivities up to 97%.