Enantioselective Iridium-Catalyzed C–H Amidation of Diaryl Phosphine Oxides

**Significance:** The synthesis of chiral phosphorus compounds is always of interest because they are crucial as ligands for asymmetric catalysis. Cramer and co-workers report the desymmetrization of diaryl phosphine oxides through iridium-catalyzed amidation. The reaction used a chiral iridium and chiral acid acting cooperatively, which was demonstrated through a match and mismatch effect.

**Comment:** The reaction tolerates some variation of substitution on the aryl rings and works best with bulky alkyl substitution on the phosphorus. Other sulfonates could be incorporated. The reaction proceeds through a C–H activation catalyzed by the chiral acid bound iridium complex followed by amidation by the sulfonyl azide.