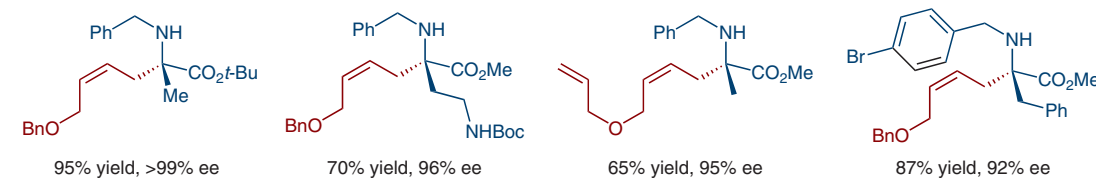
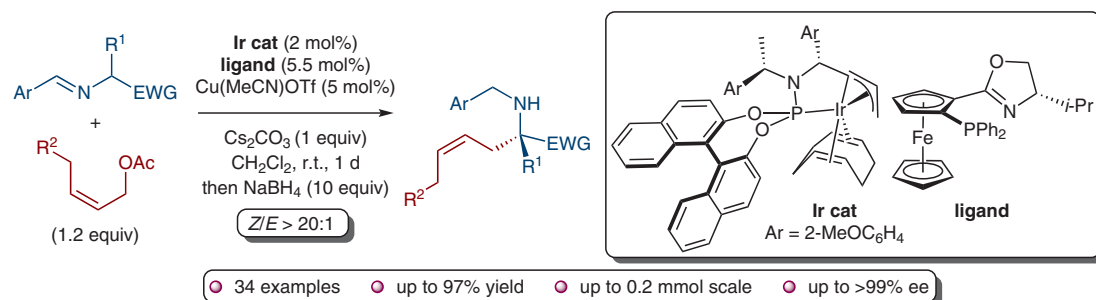
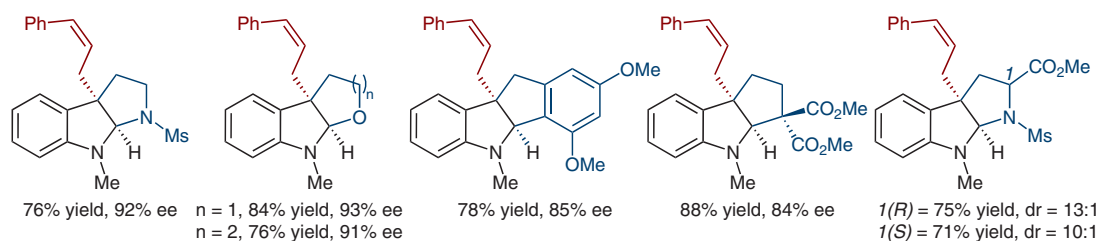
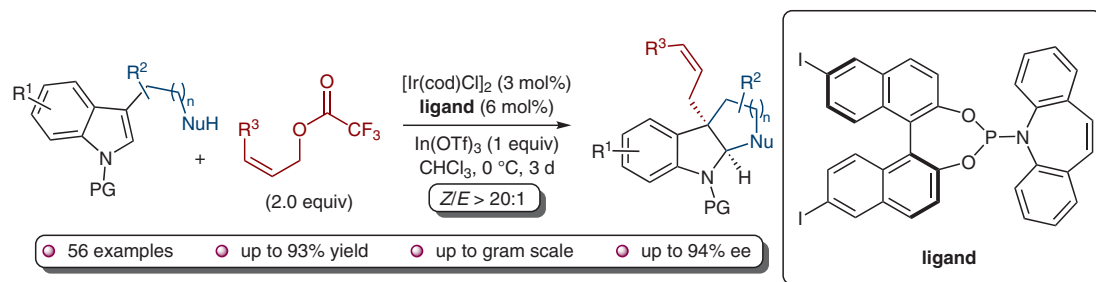


## Iridium-Catalyzed Z-Retentive Asymmetric Allylic Substitution Reactions



**Significance:** The You group reports two unique methods for enantioselective iridium-catalyzed allylic substitution reactions, which are highly selective for the thermodynamically less stable Z-alkene products. Conventionally, metal-catalyzed asymmetric allylic substitution reactions favor the E-isomer of the products.

**Comment:** The authors rationalized their reaction design by focusing on developing a catalytic system that allowed for a slow isomerization from the initial *anti*- $\pi$ -allyl complex to the more favored *syn*- $\pi$ -allyl species. Subsequent capture of the chiral *anti*- $\pi$ -iridium species by a nucleophile selectively generated the enantioenriched Z-alkene products.