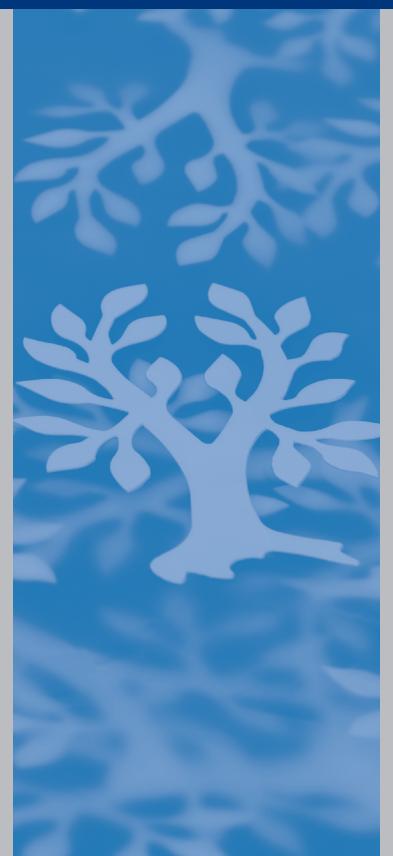
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### SYNFACTS Highlights in Current Synthetic Organic Chemistry

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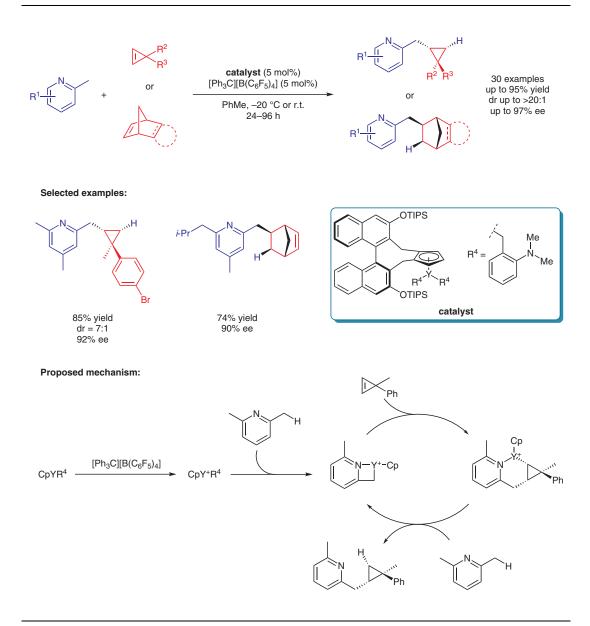
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Y. LUO, H.-L. TENG, M. NISHIURA, Z. HOU\* (RIKEN, SAITAMA, JAPAN) Asymmetric Yttrium-Catalyzed C(sp<sup>3</sup>)–H Addition of 2-Methyl Azaarenes to Cyclopropenes *Angew. Chem. Int. Ed.* **2017**, *56*, 9207–9210.

# Yttrium-Catalyzed C(sp<sup>3</sup>)–H Addition to Cyclopropenes



**Significance:** Hou and co-workers disclosed a novel asymmetric C(sp<sup>3</sup>)–H addition to cyclopropenes and norbornenes. The reaction provides complex cyclopropanes and norbornanes in high yield with good to excellent enantio- and diastereoselectivity.

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**Comment:** The proposed mechanism of the transformation involves the activation of an yttrium precatalyst by alkyl abstraction and metal-assisted deprotonation of the substrate. The cycle commences with carbometalation, and subsequent deprotonation of a second substrate completes the catalytic cycle.

#### Category

Metal-Catalyzed Asymmetric Synthesis and Stereoselective Reactions

### Key words

yttrium catalysis

azaarenes

cyclopropenes