Copper-Catalyzed Stereospecific Allylic Alkylation of Ketene Silyl Acetals

**Significance:** Allylic alkylation of enolates is an important transformation in organic synthesis. The copper-catalyzed method described employs unsymmetrical internal allylic phosphates as electrophiles, which react with excellent $\gamma$-regioselectivity and excellent Z-diastereoselectivity.

**Comment:** The $\gamma$-selective allylic alkylation of chiral allylic phosphates proceeds with efficient 1,3-anti $\alpha$-to-$\gamma$ chirality transfer. The stereochemical outcome of the product is dependent on the $E/Z$ geometry of the allylic phosphate. The authors propose the reaction pathway shown above, invoking an allyl copper(III) intermediate.

**Selected examples:**

- $\gamma$-selective allylic alkylation of chiral allylic phosphates proceeds with efficient 1,3-anti $\alpha$-to-$\gamma$ chirality transfer. The stereochemical outcome of the product is dependent on the $E/Z$ geometry of the allylic phosphate. The authors propose the reaction pathway shown above, invoking an allyl copper(III) intermediate.