

## Allylic C-H Alkylation via Pd(II) catalysis

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The development of novel carbon-carbon bond forming reactions is essential for the continuing advancement of organic synthesis. The first electrophilic, Pd(II)-catalyzed intermolecular allylic C-H alkylation will be presented. Using stabilized carbon nucleophiles, a wide variety of allylated aromatic and heteroaromatic substrates were alkylated in high yields and good selectivities. Sulfoxide was found to be necessary to promote the functionalization of the  $\pi$ -allyl Pd intermediate. The alkylation products were elaborated via reduction to amino esters, or via enantioselective conjugate addition to  $\alpha,\alpha$ -disubstituted amino acid precursors. We anticipate that the strategy of direct conversion of C-H bonds to C-C bonds will yield powerful, simplifying synthetic disconnects.

