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Escape from Hydrofunctionalization: Palladium Hydride-Enabled Difunctionalization of Conjugated Dienes and Enynes
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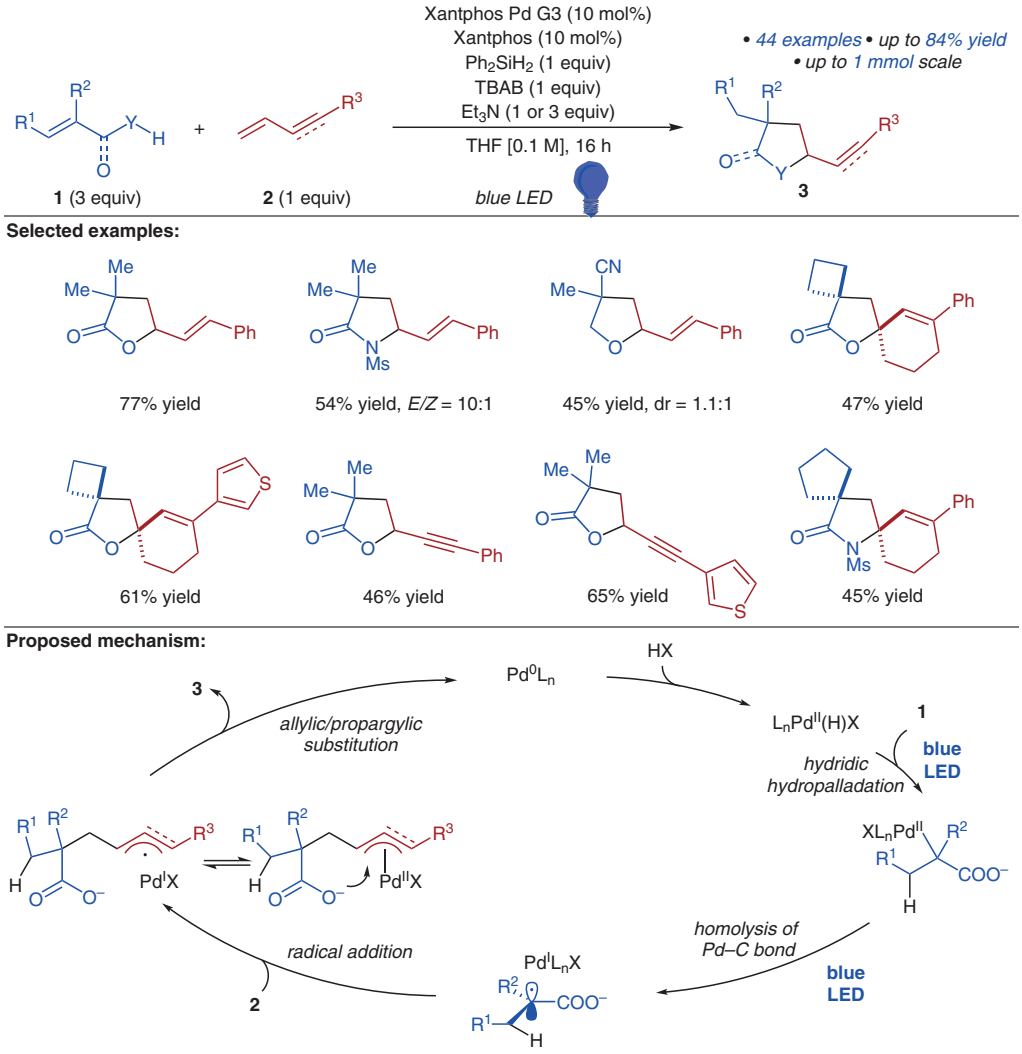
Reversing the Reactivity of Palladium Hydrides Using Blue LED's: Difunctionalization of Conjugated π-Systems



Significance: The hydropalladation (monofunctionalization) of conjugated dienes and enynes is limited by the amount of molecular complexity that can be installed in a single step. Gevorgyan and Zhang report an effective difuntionalization of conjugated π-systems using blue LEDs to enhance the hydricity of the intermediate palladium hydride species, ultimately merging Pd^0/Pd^{II} and Pd^I/Pd^{II} reactivities.

Comment: The authors performed deuterium labelling experiments, using deuterated diphenylsilane. Although the addition of silane was beneficial to the yield of the transformation, no deuterium incorporation was observed when employing Ph_2SiD_2. This result suggests that the Brønsted acid may act as the predominant hydrogen source for Pd–H.

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Category
Metals in Synthesis

Key words
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Synfact of the Month