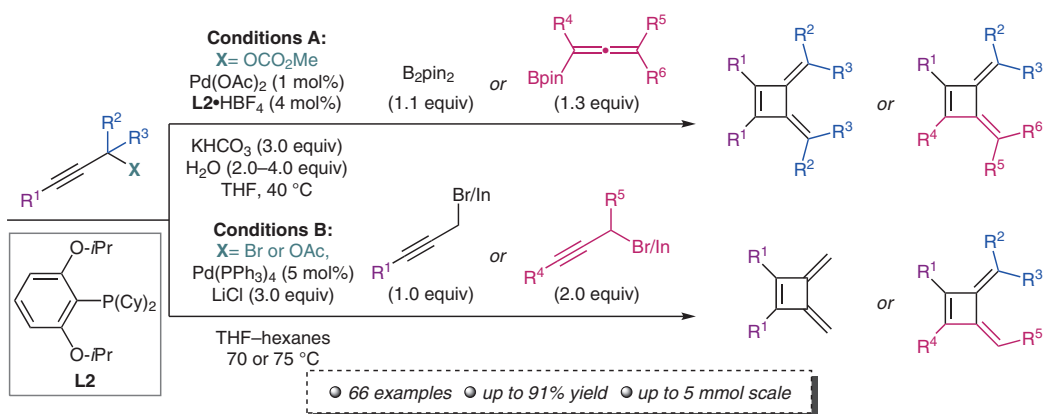


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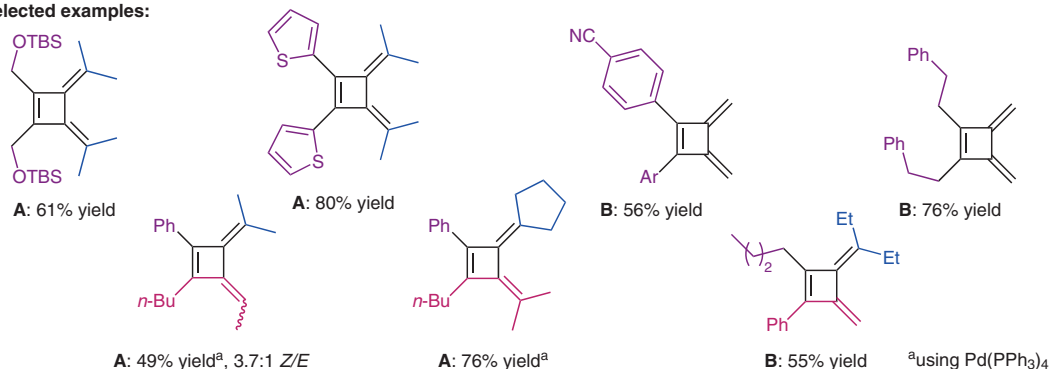
Palladium-Catalysed Construction of Butafulvenes

Nat. Chem. 2022, 14, 1185–1192, DOI: 10.1038/s41557-022-01017-9.

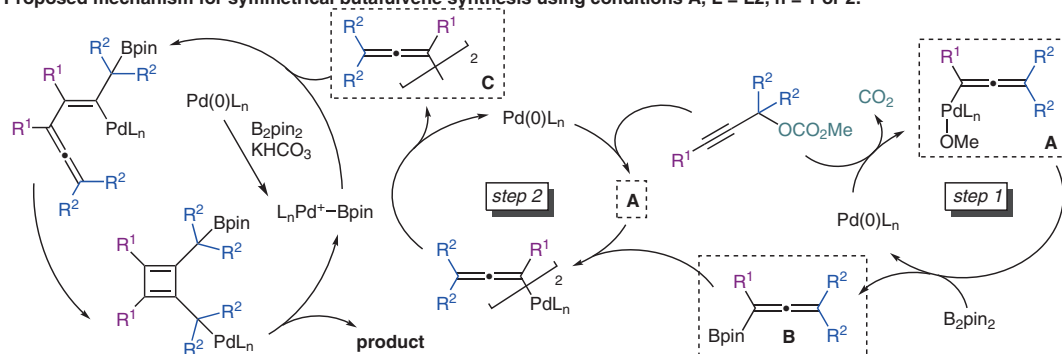
Palladium-Catalyzed Butafulvene Synthesis



Selected examples:



Proposed mechanism for symmetrical butafulvene synthesis using conditions A, L = L2, n = 1 or 2:



Significance: A palladium-catalyzed coupling of propargylic carbonates or bromides has been developed to synthesize butafulvene derivatives. Two sets of mild reaction conditions are reported to access either symmetrical butafulvenes or unsymmetrical products when coupling with allenyl boronate or in-situ-prepared allenyl-indium reagents.

Comment: Primary propargyl carbonates were unreactive; however, in-situ prepared allenyl-indium reagents could be used as an alternative to access symmetrical terminal butafulvenes. Intermediate tracking and control experiments shed light on a potential reaction pathway, indicating that bisallene **C** undergoes palladium-catalyzed cycloisomerization to generate the product.

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