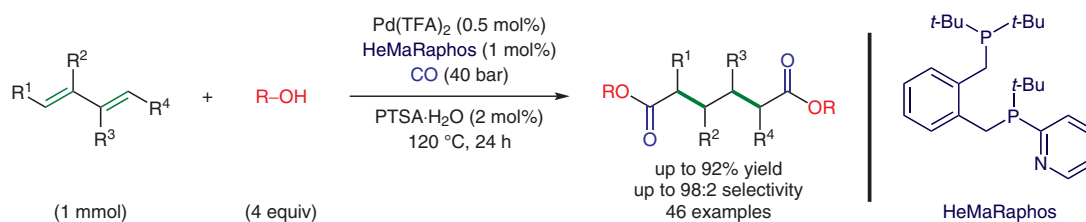


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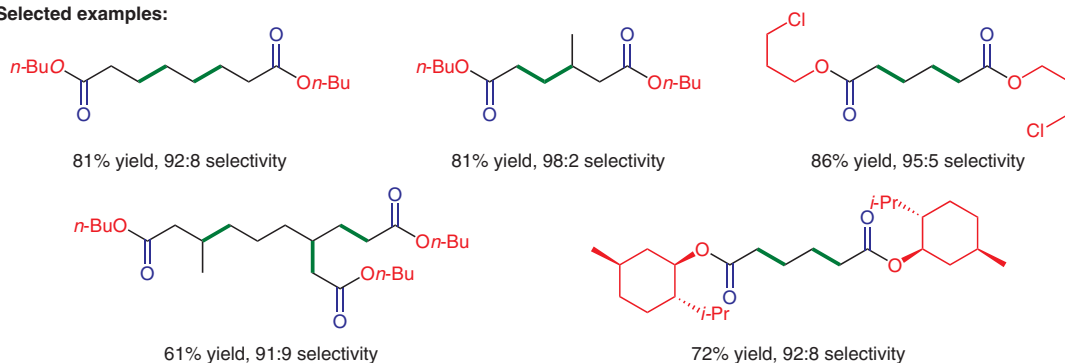
Direct Synthesis of Adipic Acid Esters via Palladium-Catalyzed Carbonylation of 1,3-Dienes

*Science* 2019, 366, 1514–1517.

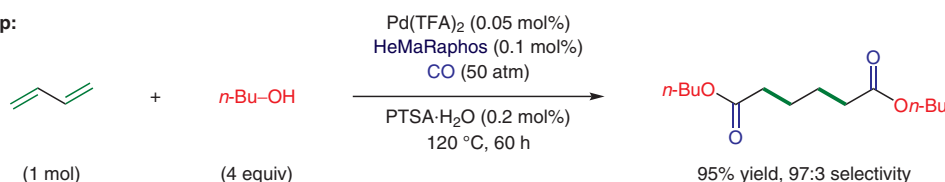
## Palladium-Catalyzed Dicarboxylation of 1,3-Dienes for the Synthesis of Adipic Acid Esters



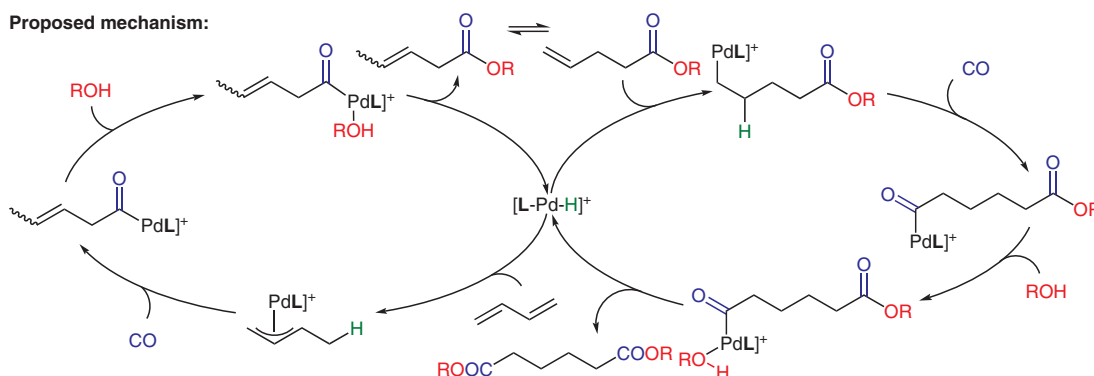
### Selected examples:



### Scale up:



### Proposed mechanism:



**Significance:** The authors describe a palladium-catalyzed dicarboxylation of 1,3-dienes using carbon monoxide. Various adipate diesters were produced in good to excellent yield with high selectivity.

**Comment:** The authors used kinetic experiments to support the proposed mechanism. Scaling up the reaction to over 200 g with a lower catalyst loading gave the product in excellent yield and selectivity.

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Synfacts 2020, 16(03), 0289 Published online: 18.02.2020  
DOI: 10.1055/s-0039-1690348; Reg-No.: L00320SF

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Category

Metals in Synthesis

Key words

palladium catalysis

dienes

carbonylation

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