

R. SANG, P. KUCMIERCZYK, R. DÜHREN, R. RAZZAQ, K. DONG, J. LIU, R. FRANKE*, R. JACKSTELL, M. BELLER* (EVONIK PERFORMANCE MATERIALS GMBH, MARL, RUHR-UNIVERSITÄT, BOCHUM, AND UNIVERSITÄT ROSTOCK, GERMANY)

Synthesis of Carboxylic Acids by Palladium-Catalyzed Hydroxycarbonylation
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Palladium-Catalyzed Synthesis of Carboxylic Acids

Category

Metals in Synthesis

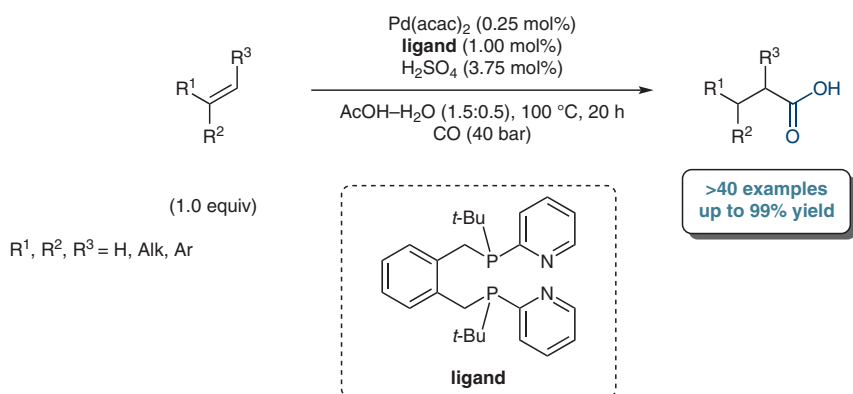
Key words

carboxylic acids

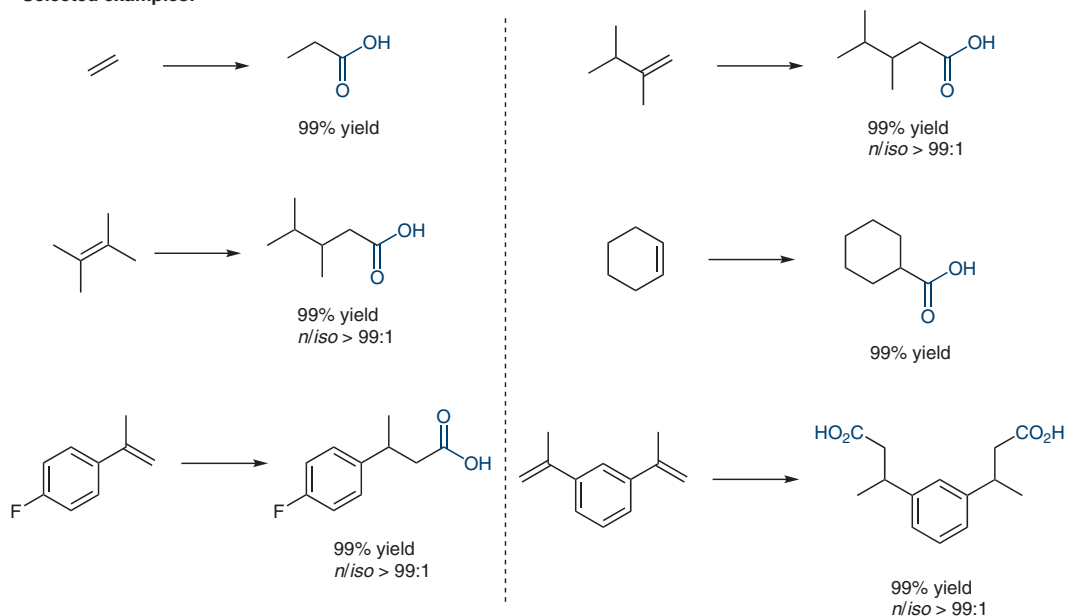
palladium catalysis

hydroxy-carbonylation

Synfact
of the
Month



Selected examples:



Significance: The authors report a very general and high yielding palladium-catalyzed synthesis of carboxylic acids, starting from alkenes. The method is performed in aqueous environment and uses only 0.25 mol% of $\text{Pd}(\text{acac})_2$. High pressured carbon monoxide is used as 'CO' source, ensuring a good atom economy.

Comment: Various substituted alkenes (over 40 examples) have been successfully transformed into their corresponding carboxylic acids. The method provides the product in high *n/iso* ratio and can tolerate highly reactive functional groups, such as ketones or phosphates.

SYNFACTS Contributors: Paul Knochel, Simon Graßl
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