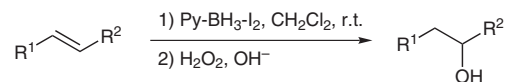
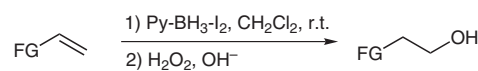


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Hydroboration with Pyridine Borane at Room Temperature

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Hydroboration with Pyridine Borane

R¹ = Me, R² = Ph: 92% yield, 15:1 regioselectivityFG = OBz, NBn₂, NHBz 74–98% yield, >19:1 regioselectivity

Significance: A stable available pyridine-borane complex after the reaction with iodine gives a selective hydroborating agent, active at room temperature. Acetylenes can be transformed into ketones after oxidation. Mono-, di- and trisubstituted alkenes can be readily hydroborated leading to mono-adducts at room temperature. Functional groups like esters, amines and amides are tolerated.

Comment: Despite the numerous existing hydroborating agents, developed to date, there is still the lack of a cheap, selective, robust and stable reagent. Pyridine-borane complex is a stable and not air-sensitive liquid. On the reaction with iodine, it is transformed into a strong but selective hydroborating agent, that reacts equally well with alkynes and alkenes, tolerating reducible functional groups. The procedure is very simple and practical.

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