

DIRECTED ENANTIOSELECTIVE COUPLING OF ALDEHYDES AND ALKENES

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In recent years, coupling approaches combining aldehydes and alkenes, readily available feedstocks, have started to emerge as an appealing alternative to classical carbonyl addition reactions (Fig. 1a).^[1] However, existing enantioselective catalyst systems invariably deliver the “branched” product and typically require activated olefin reactants.^[1] Enantioselective methods to access the highly valuable linear products (Fig. 1b) using a direct redox-neutral coupling of simple unactivated α -olefins have not yet been developed.^[2] In this presentation we will detail an enantioselective redox-neutral coupling that takes advantage of a remote directing group to solve problems of regio- and stereoselectivity.^[3]

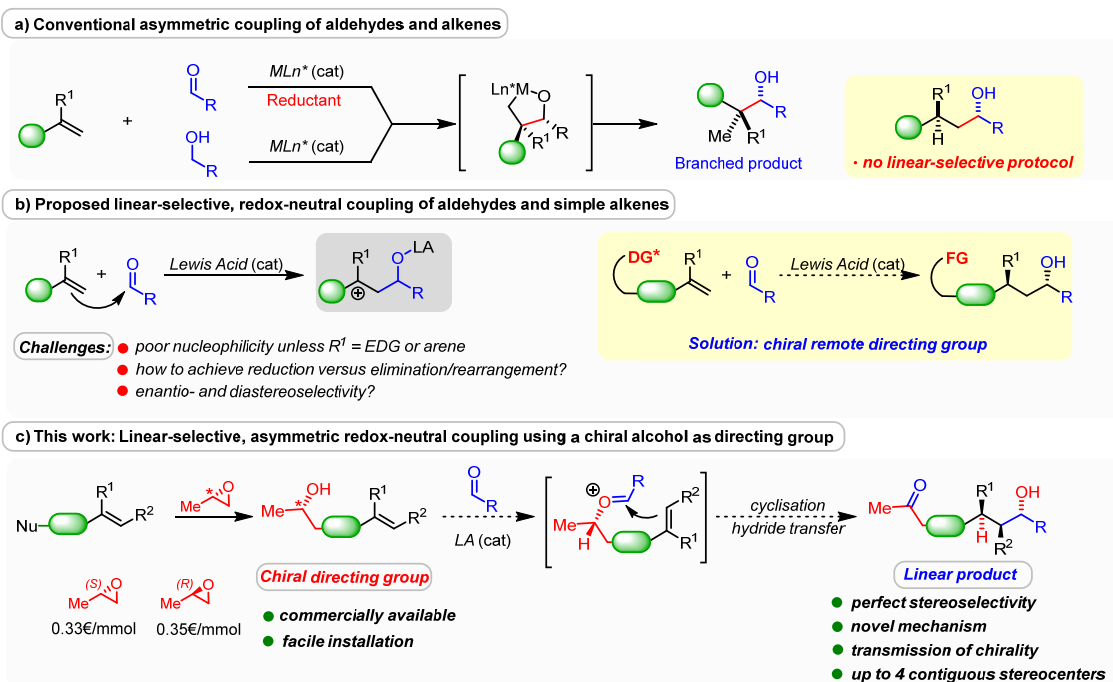


Figure 1. a) Reductive coupling of aldehydes and alkenes; b) and c) a novel linear-selective, enantioselective redox-neutral coupling via a remote directing group.

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