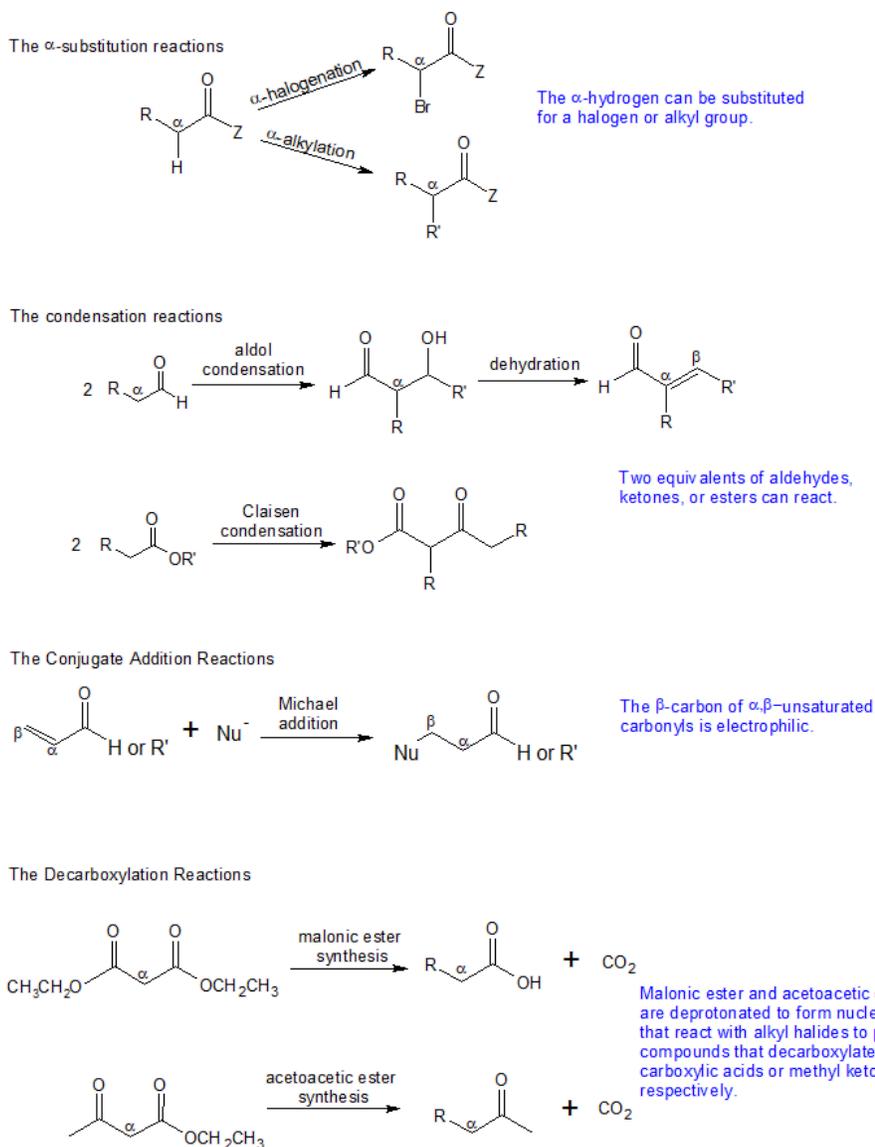


23.3: REACTION OVERVIEW

OVERVIEW

The reactivity of the alpha-carbon can be grouped into three main categories: alpha-substitution, condensation, and decarboxylation. Alpha,beta-unsaturated carbonyls can undergo conjugate addition reactions that are called Michael Additions when the nucleophile is an alpha-carbon. Because the reactants, reagents and products can contain multiple functional groups, it is helpful to initially focus on the overall conversions between functional groups BEFORE digging into the details of each reaction pathway. It is also useful to label the alpha and beta carbons to help follow the reactivity. An overview of the reactions that will be studied in this chapter are shown below.

α-Carbon and α,β-Unsaturated Carbonyl Reaction Overview (The reaction details are discussed in the subsequent sections of this chapter.)



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