An alkylation is a reaction or a reaction sequence that introduces one or more alkyl groups to a molecule by replacing hydrogen atoms or lone pairs with alkyl groups.

eg. 1:

\[
\text{CH}_3\text{C} = \text{C} - \text{H} \xrightarrow{1. \text{NaH}} \text{CH}_3\text{C} = \text{C} - \text{CH}_2\text{CH}_3
\]

eg. 2:

\[
\text{H} \quad \text{excess CH}_3\text{I} \quad \text{CH}_3\text{N}^+\text{CH}_3 \quad \text{I}^-
\]

eg. 3:

\[
\text{PhCOOH} \xrightarrow{\text{H}_2\text{O}} \text{PhCOCH}_2\text{CH}_2\text{CH}_3
\]

eg. 4:

\[
\text{PhH} \quad \text{catalyst: AlCl}_3 \quad \text{CH}_3\text{Cl} \quad \text{PhCH}_3
\]

Contributors

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