An imine is a compound that has the following general structural formula.

\[
\begin{array}{c}
\text{R}^1 \\
\text{C} = \text{N} \\
\text{R}^2 \\
\text{R}^3
\end{array}
\]

\(\text{R}^1, \text{R}^2, \text{and R}^3\) could be hydrogen atoms, alkyl groups, aryl groups, or any combination thereof.

eg:

\[
\begin{array}{c}
\text{H} \\
\text{H} \\
\text{H} \\
\text{H}
\end{array}
\]

\[
\begin{array}{c}
\text{CH}_3 \\
\text{H} \\
\text{H}
\end{array}
\]

\[
\begin{array}{c}
\text{C} = \text{N} \\
\text{C}_6\text{H}_5
\end{array}
\]

\[
\begin{array}{c}
\text{CH}_3 \\
\text{CH}_3
\end{array}
\]

If, in an imine molecule, the ligand on the nitrogen atom is an alkyl or aryl group, the imine is also called a Schiff's base.

eg:

\[
\begin{array}{c}
\text{CH}_2 \\
\text{CH}_2\text{CH}_2
\end{array}
\]

\[
\begin{array}{c}
\text{CH}_3 \\
\text{CH}_3 \\
\text{C}_6\text{H}_5
\end{array}
\]

The carbon-nitrogen double bond in an imine molecule is called the imine group.
Contributors

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