A prochiral molecule is an achiral molecule containing at least one pair of enantiotopic ligands.

eg:

\[
\begin{align*}
\text{OH} \\
\text{CH}_3 \\
\text{C} \\
\text{H}_a \\
\text{H}_b \\
\end{align*}
\]

1 is achiral, and H\text{a} and H\text{b} in 1 are enantiotopic. Thus, 1 is prochiral. In a prochiral molecule, an atom bearing a pair of enantiotopic ligands is called a prochiral center or prochirality center. If a prochirality center is a carbon atom, it can also be called a prochiral carbon.

see also chiral molecule, chiral center

Contributors

• Gamini Gunawardena from the OChemPal site (Utah Valley University)