Heterolysis or heterolytic bond cleavage is the breakage of a single bond with the two electrons in the bond distributed unequally between the two atoms bound by the bond.

\[
\begin{align*}
A & \rightleftharpoons B \\
\quad & \longrightarrow \\
A^+ & + \quad :B^- \\
\end{align*}
\]

eg. 1:

\[
\begin{align*}
(CH_3)_3C & \rightleftharpoons Br^- \\
\quad & \longrightarrow \\
(CH_3)_3C^+ & + \quad :Br^- \\
\end{align*}
\]

eg. 2:

\[
\begin{align*}
H & \rightleftharpoons Cl^- \\
\quad & \longrightarrow \\
H^+ & + \quad :Cl^- \\
\end{align*}
\]

see also homolysis

Contributors

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