A carbocation is a species containing a carbon atom that lacks an octet of valence electrons and bears a formal charge of +1.

eg:

\[
\begin{align*}
\text{CH}_3 & - \text{C}^+ - \text{CH}_3 \\
\text{CH}_3 & - \text{C}^+ - \text{C} = \text{C} - \text{CH}_3
\end{align*}
\]

Some carbocations are resonance stabilized, in which case some or all resonance forms of the species fit the above definition.

eg:

\[
\begin{align*}
\text{H} & \text{H} \text{H} \\
\text{H} & \text{H} \text{H} \\
\text{H} & \text{H} \text{H} \\
\text{H} & \text{H} \text{H}
\end{align*}
\]

Some or all resonance forms of the species fit the above definition.

eg:

\[
\begin{align*}
\text{H} & \text{H} \text{H} \\
\text{H} & \text{H} \text{H} \\
\text{H} & \text{H} \text{H} \\
\text{H} & \text{H} \text{H}
\end{align*}
\]

Some or all resonance forms of the species fit the above definition.

see also alkyl carbocation, allylic carbocation, benzylic carbocation, acylium ion, alkenyl carbocation, aryl carbocation

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Contributors

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