A nucleophilic solvent is a solvent that acts as the nucleophile in a reaction. The most common nucleophile solvents are water and alcohols.

eg:

\[
\begin{align*}
(CH_3)_2CBr & \xrightarrow{\text{solvent: water}} (CH_3)_2COH \\
(CH_3)_2CBr & \rightleftharpoons \text{H}_2\text{O} \\ 
(CH_3)_2C^+ & \rightleftharpoons \text{H}_2\text{O} \\
(CH_3)_2C^+ & \rightarrow \text{H}_2\text{O}^+ \\
(CH_3)_2CH\text{H}_2^+ & \rightarrow (CH_3)_2CH\text{H}_2^+ \\
(CH_3)_2CH\text{H}_2^+ & \rightarrow \text{H}_2\text{O}
\end{align*}
\]

In this nucleophilic substitution reaction, the solvent water acts as the nucleophile as well.

Contributors

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