**metathesis**

A bimolecular process formally involving the exchange of a bond (or bonds) between similar interacting chemical species so that the bonding affiliations in the products are identical (or closely similar) to those in the reactants. For example:

\[
\begin{align*}
R-\text{CH=CH}=R' + R'-\text{CH=CH}=R' & \rightarrow R-\text{CH}=R + R'-\text{CH}=R' \nonumber \\
\end{align*}
\]

(The term has its origin in inorganic chemistry with a different meaning, but this older usage is not applicable in physical organic chemistry.)

**Source:**
PAC, 1994, 66, 1077 (Glossary of terms used in physical organic chemistry (IUPAC Recommendations 1994)) on page 1139