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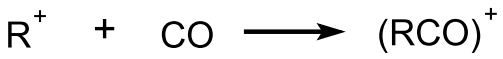
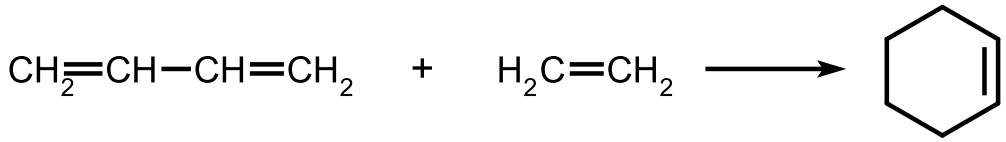
attachment

A transformation by which one molecular entity (the substrate) is converted into another by the formation of one (and only one) two-centre bond between the substrate and another molecular entity and which involves no other changes in connectivity in the substrate. For example, the formation of an acyl cation by attachment of carbon monoxide to a carbenium ion (R^+):



The product of an attachment may also be the adduct of the two reactants, but not all adducts can be represented as the products of an attachment. (For example, the Diels–Alder cycloaddition:



results in an adduct of buta-1,3-diene and ethene, but the reaction cannot be described as an attachment since bonds are formed between more than two centres.)
See also: colligation, electron attachment

Source:
PAC, 1994, *66*, 1077 *(Glossary of terms used in physical organic chemistry (IUPAC Recommendations 1994))* on page 1086

