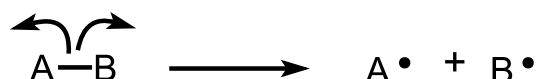


## homolysis (homolytic)

The cleavage of a bond ('homolytic cleavage' or 'homolytic fission') so that each of the molecular fragments between which the bond is broken retains one of the bonding electrons. A unimolecular reaction involving homolysis of a bond (not forming part of a cyclic structure) in a molecular entity containing an even number of (paired) electrons results in the formation of two radicals:



It is the reverse of colligation. Homolysis is also commonly a feature of bimolecular substitution reactions (and of other reactions) involving radicals and molecules.

**See also:** bond-dissociation energy, heterolysis

**Source:**

PAC, 1994, 66, 1077 (*Glossary of terms used in physical organic chemistry (IUPAC Recommendations 1994)*) on page 1122