

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*.

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