

direct reaction

A chemical process in which the reactive complex has a lifetime that is shorter than its period of rotation. In a *molecular-beam* experiment the reaction products of a direct reaction are scattered, with reference to the centre of mass of the system, in preferred directions rather than at random. Some direct reactions are impulsive which means that there is an energy exchange that is very fast compared to the vibrational time scale.

A direct reaction is to be contrasted with an *indirect reaction*, also known as a *complex-mode reaction*.

1996, 68, 163