

direct reaction

Also contains definition of: impulsive 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.

Source:

PAC, 1996, 68, 149 (*A glossary of terms used in chemical kinetics, including reaction dynamics (IUPAC Recommendations 1996)*) on page 163