

**molecular beams**

A molecular beam is produced by allowing a gas at higher pressure to expand through a small orifice into a container at lower pressure. The result is a beam of particles (atoms, free radicals, molecules or ions) moving at approximately equal velocities, with few collisions occurring between them.

In a crossed molecular-beam experiment a reaction is studied using collimated beams of reactant molecules. For a bimolecular reaction, beams of the two reactants are caused to impinge on one another, often at an angle of 90°.

In a beam-gas scattering experiment a collimated beam is introduced into a gas, and the scattering patterns are observed.

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