

**reaction cross-section,  $\sigma_r$** 

A quantity used in collision theories of reactions in order to interpret calculated or experimental rates. In some collision theories the reaction cross-section is considered to be related to  $b_{\max}$ , the maximum value of the impact parameter that allows reaction to occur, by:

$$\sigma_r = P_r \pi b_{\max}^2$$

where  $P_r$  is the reaction probability.

**See:** collision cross-section

**Source:**

PAC, 1996, 68, 149 (*A glossary of terms used in chemical kinetics, including reaction dynamics (IUPAC Recommendations 1996)*) on page 183