

reaction cross-section, σ_{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:

$$\sigma_{\text{r}} = P_{\text{r}}\pi b_{\text{max}}^2$$

where P_{r} is the reaction probability.

See *collision cross-section*.

1996, 68, 183