Arrhenius equation

An equation that represents the dependence of the rate constant k of a reaction on the absolute temperature T:

$$k = A\, e^{\frac{-E_a}{RT}}$$

In its original form the pre-exponential factor A and the activation energy E_a are considered to be temperature-independent.

See also: modified Arrhenius equation

Source:
PAC, 1996, *68*, 149 *(A glossary of terms used in chemical kinetics, including reaction dynamics (IUPAC Recommendations 1996))* on page 153
PAC, 1994, *66*, 1077 *(Glossary of terms used in physical organic chemistry (IUPAC Recommendations 1994))* on page 1086
PAC, 1990, *62*, 2167 *(Glossary of atmospheric chemistry terms (Recommendations 1990))* on page 2175