**Arrhenius equation**

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

$$ k = A e^{-E_a/RT} $$

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