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activation energy (Arrhenius activation energy)

An empirical parameter characterizing the exponential temperature dependence of the rate coefficient, k, $E_a = R\,T^2\,\frac{d(\ln k)}{dT}$, where R is the gas constant and T the thermodynamic temperature. The term is also used for threshold energies in electronic potential surfaces, in which case the term requires careful definition.

Source:
Green Book, 2nd ed., p. 55

See also:
PAC, 1996, *68*, 149 *(A glossary of terms used in chemical kinetics, including reaction dynamics (IUPAC Recommendations 1996))* on page 151
PAC, 1993, *65*, 2291 *(Nomenclature of kinetic methods of analysis (IUPAC Recommendations 1993))* on page 2294
PAC, 1994, *66*, 1077 *(Glossary of terms used in physical organic chemistry (IUPAC Recommendations 1994))* on page 1112

