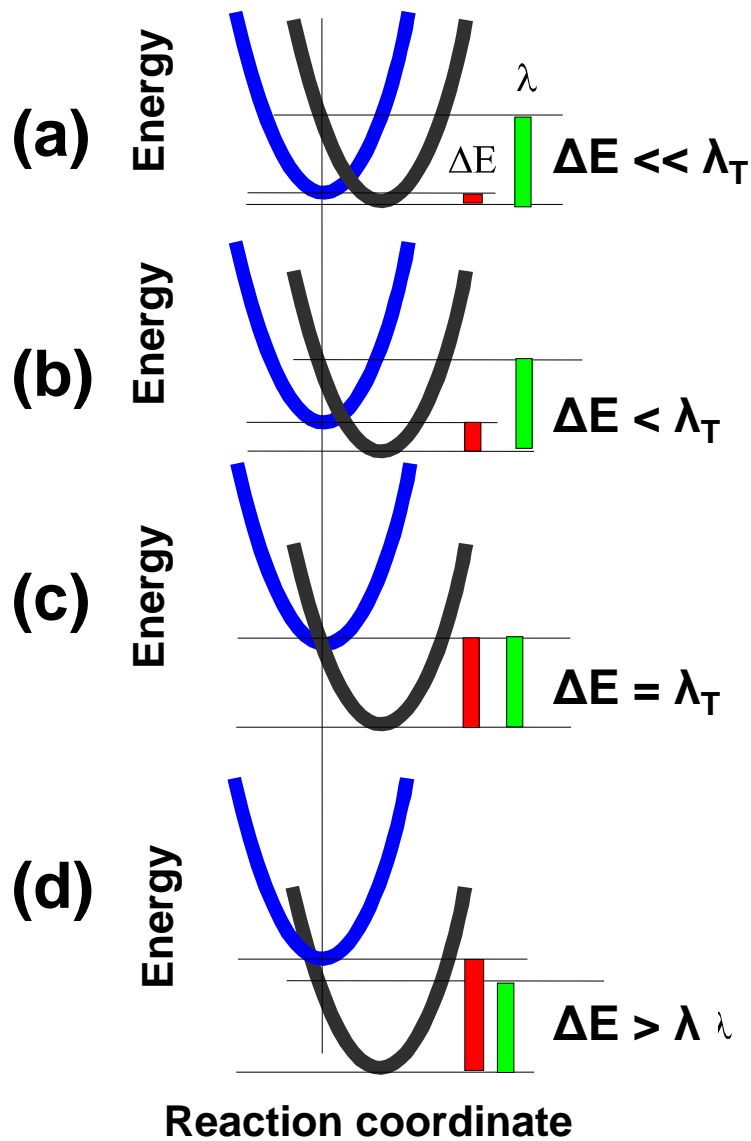
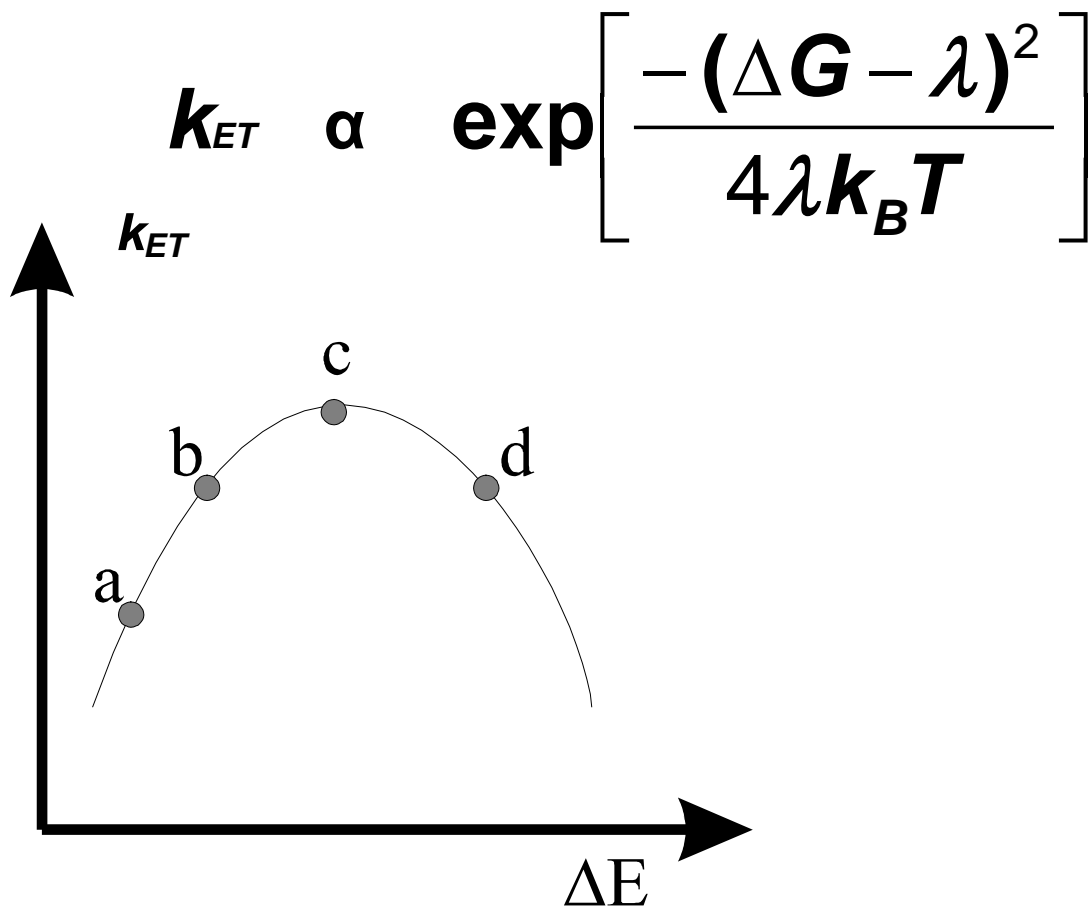


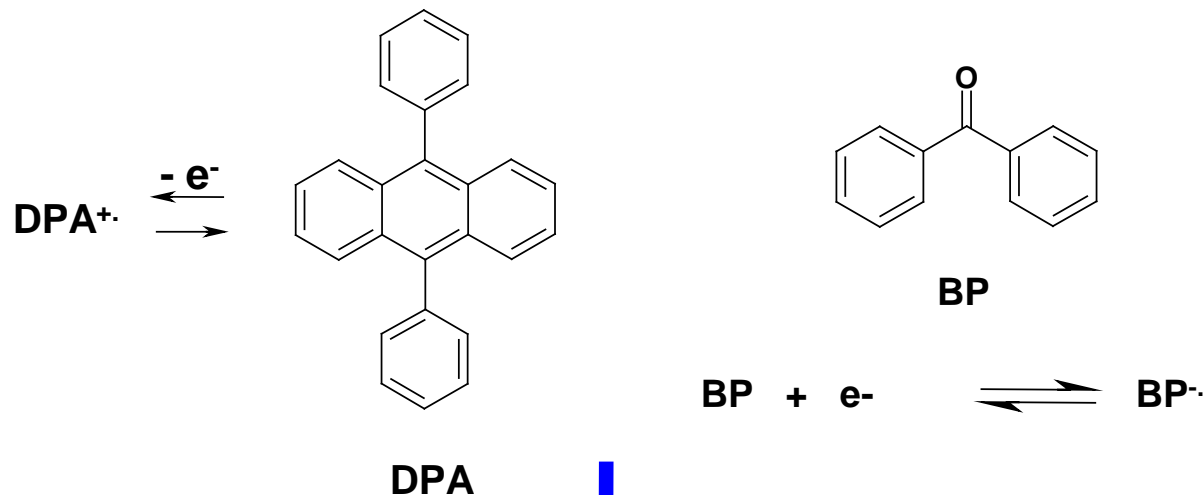
Marcus Theory for Electron Transfer: Reaction Rates are Exponentially Related to Excess Free Energy



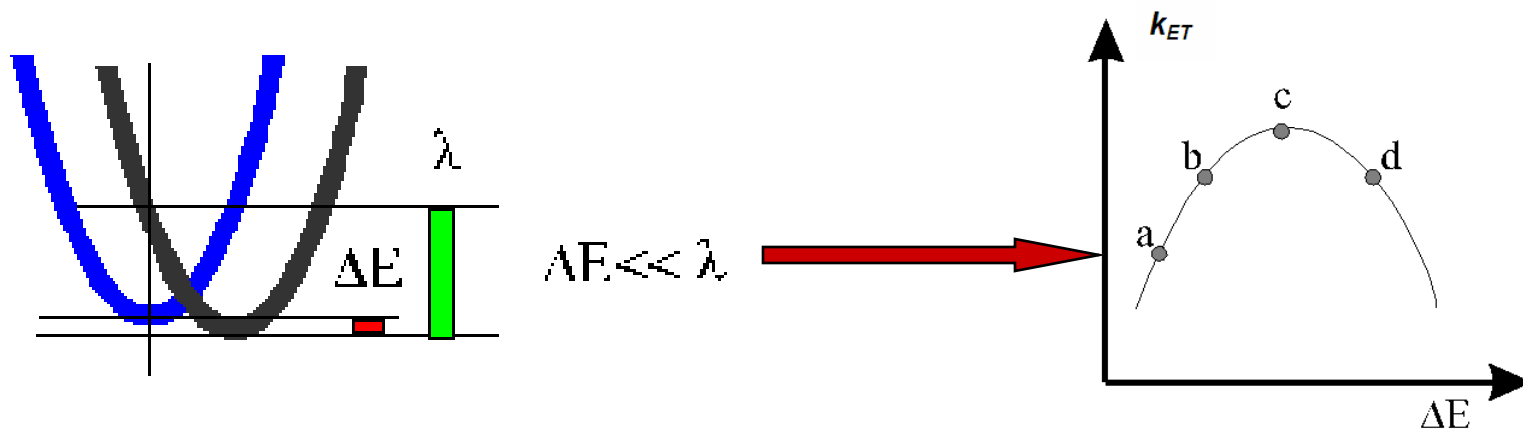
Marcus, R. A. *J. Chem. Phys.* 1965, 43, 2654-2657.
 Marcus, R. A. *J. Chem. Phys.* 1970, 52, 2803-2804.
 Sutin, N. *Acc. Chem. Res.* 1982, 15, 275-282.



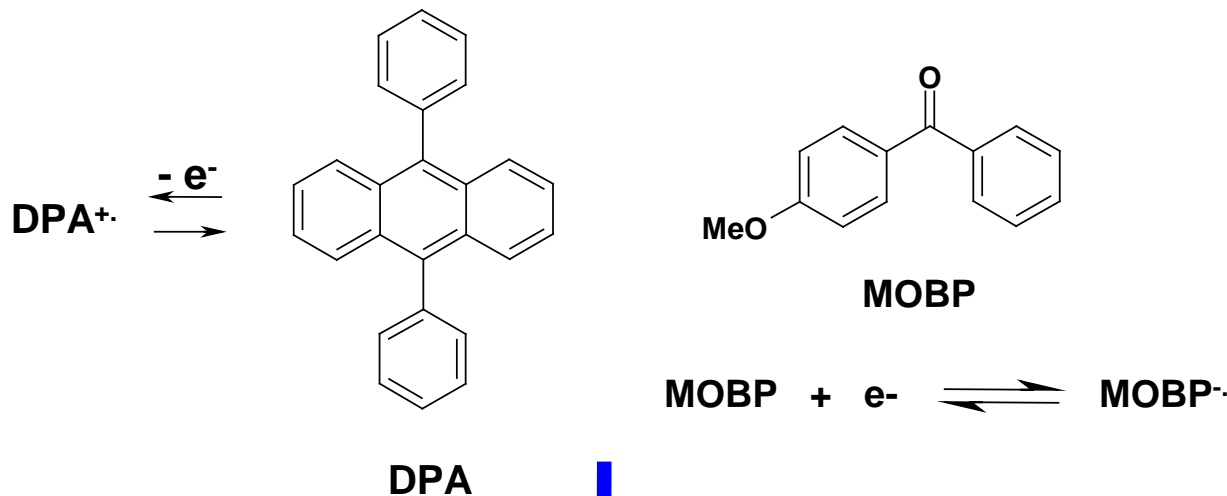
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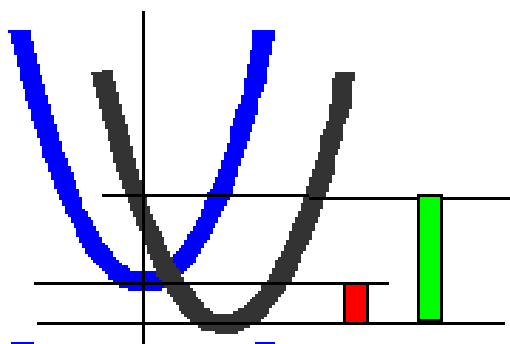
$$k_{ET} \propto \exp\left[\frac{-(\Delta G - \lambda)^2}{4\lambda k_B T}\right]$$



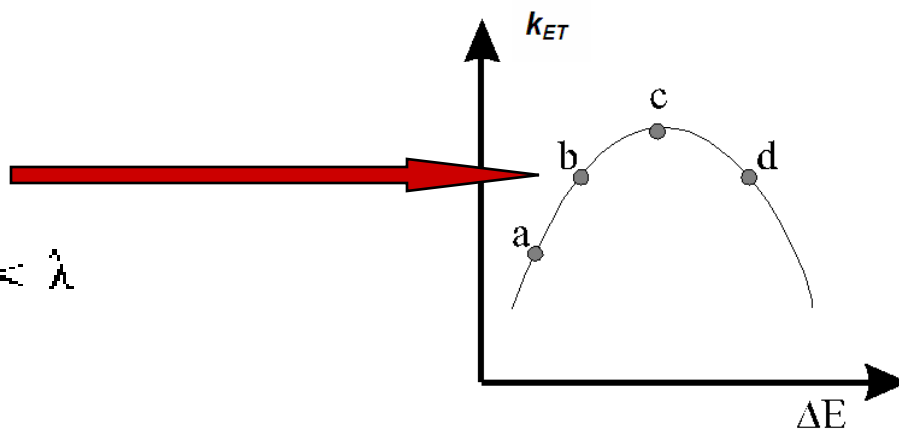
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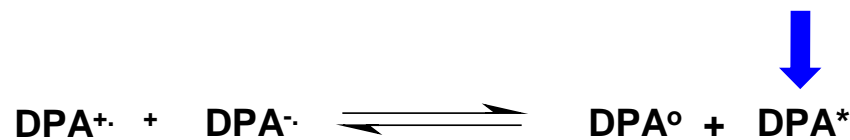
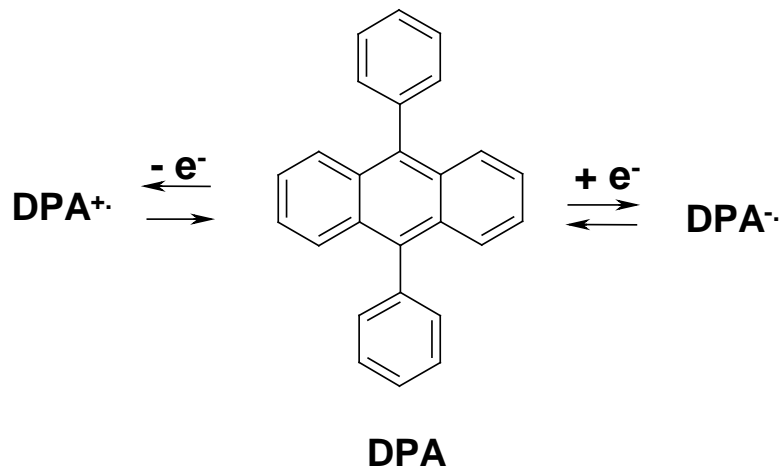
$$k_{ET} \propto \exp\left[\frac{-(\Delta G - \lambda)^2}{4\lambda k_B T}\right]$$



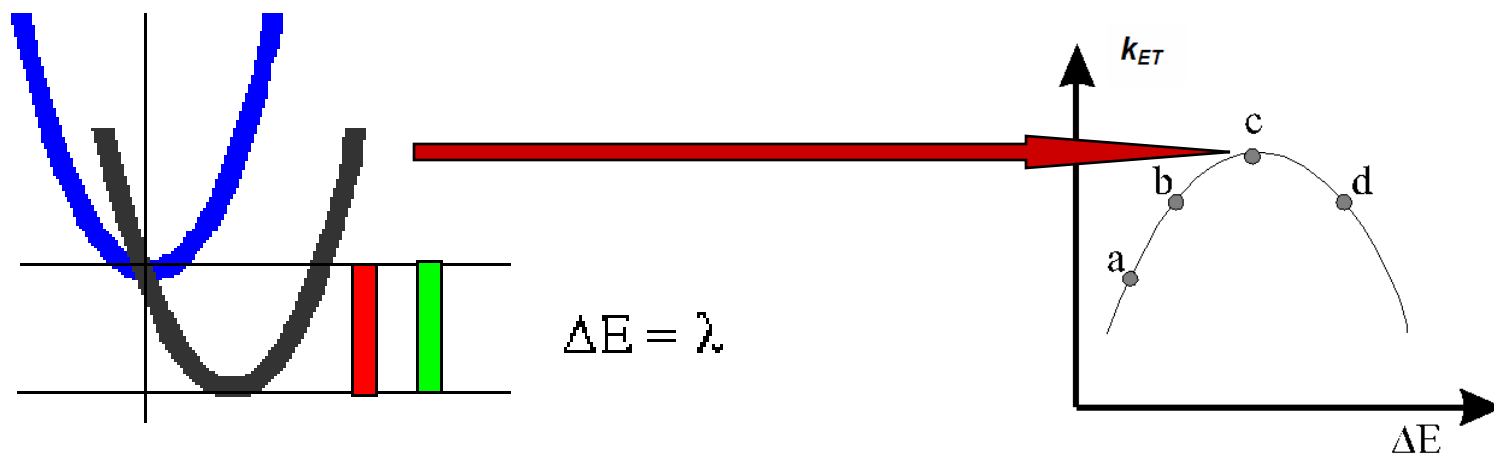
$$\Delta E < \lambda$$



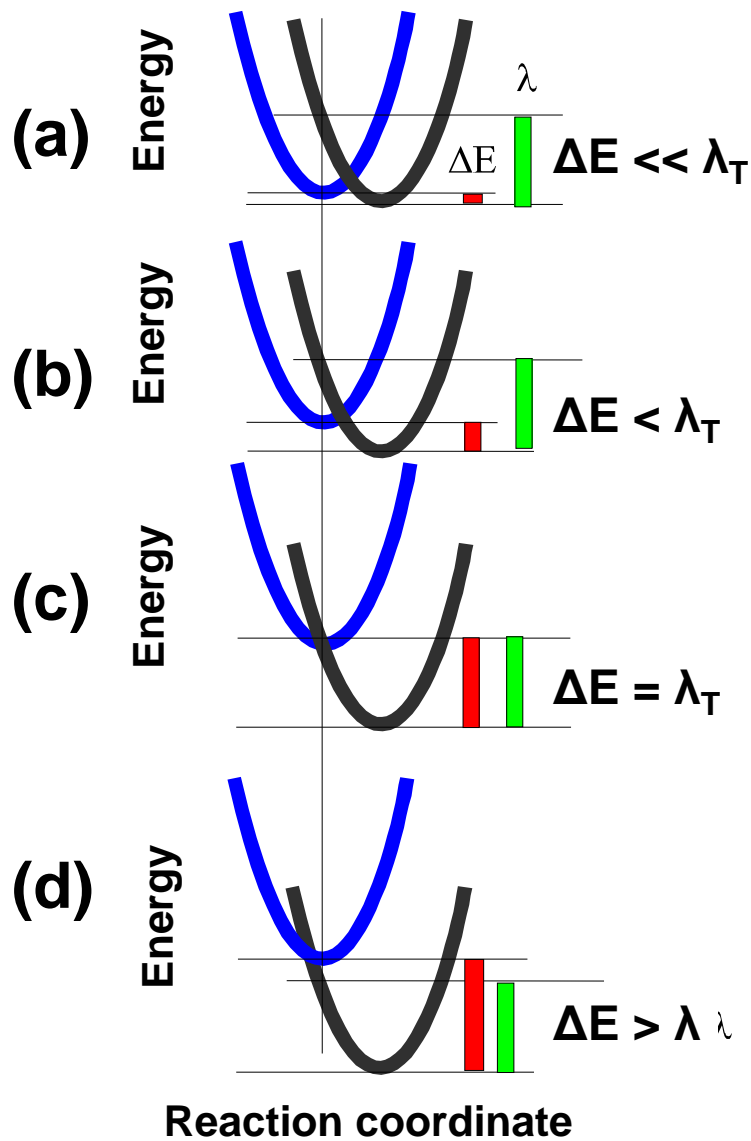
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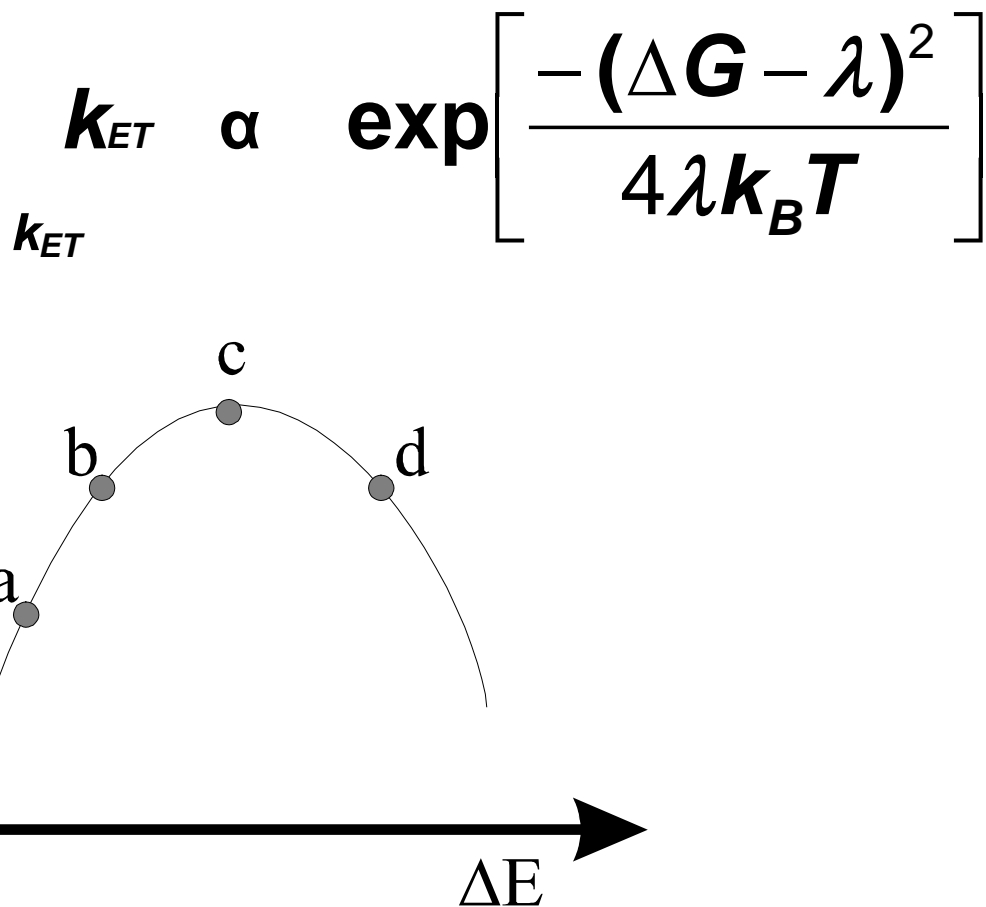
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Marcus Theory for Electron Transfer: Reaction Rates are Exponentially Related to Excess Free Energy



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Thanks to Bernard Kippelen