

$E_{\text{kinetic}}$   
(activated complex, no catalyst)

$E_{\text{kinetic}}$   
(activated complex, with catalyst)

$kT$

Energy (kJ/mol)

Proportion of molecules

Reactants

$\text{CO}_2 + \text{H}_2$

Products

$\text{CH}_4 + \text{H}_2\text{O}$

Reaction Progress

$E_a$  (no catalyst)

$E_a$  (with catalyst)

$\Delta G$

