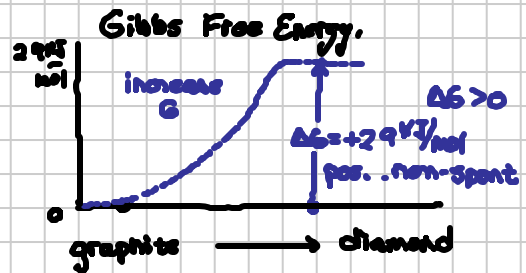
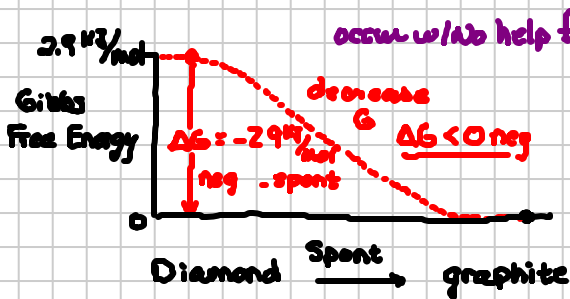


# Lecture 17.2 Chemical Potential Energy: Gibbs Free Energy

Note Title

THIRDS PART

Reactions are spontaneous when the chemical free energy decreases.



## Gibbs Free Energy

$\Delta H$  ... change in enthalpy

$\Delta H > 0$  endothermic  
heat considered a reactant

$\Delta H < 0$  exothermic  
heat considered a product

Spontaneity favored by exothermic reactions

Entropy:  $S$

$\Delta S$  change in entropy

Spontaneity favored by

increases in entropy

$\Delta S > 0$

entropy measure of randomness or disorder.

$$\text{office } S_{\text{start}} < S_{\text{office end}} \} \Delta S_{\text{office}} > 0$$