Focus Question: Consider a sample of CaO(s) at 298K and 1 atm. Does the Gibbs energy of the sample increase, decrease of remain the same if the temperature is raised to 350K? Does the Gibbs energy of the original sample increase, decrease of remain the same if the pressure is increased to 2 atm?

Important formula





1. For a constant temperature process what is the relationship between dG, V and p?
2. Using the equation you have derived in 1 solve for a relationship between ∆G and ∆p assuming that V and T are constant.
3. Use the ideal gas law to obtain a relationship between ∆G and ∆p for n moles of an ideal gas at constant T and V.
4. Using 3 and 3the definition of chemical potential above to obtain a relationship between μ p and T.
5. How does the chemical potential change as the temperature and pressure are increased?