Chemical Thermodynamics

More examples

- Occasionally we are able to calculate the state function change and need to get one of the integration limits.
- What is the final temperature of 1 mole of Ar (g) expanded reversibly and adiabatically from $T_1 =$ 298 K, $P_1 = 10$ bar to $T_2 = ?$, $P_2 = 1$ bar. Assume Ar(g) is ideal and $C_p = 5/2R$.

More examples

 $\Delta S =$

Liquids

- What about condensed states?
- Determine ΔU for the compression of 100 g of H₂O (I) from T₁ = 350 K, V₁ = 0.10 L to T₂ = 300 K, V₂ = 0.05 L
- Equation of state for liquid encompasses P-V-T data
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 - 0 κ

Partial Derivative Manipulations

Evaluate

Partial Derivative Manipulations

- Four main manipulations
- Subscript permutter

o Inverter

o Chain rule

• Expanssion

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