

[tex53] Structural transitions of iron

At constant atmospheric pressure, the stable phase of Fe below 900°C and above 1400°C is α -iron with BCC structure. Between these temperatures, the stable phase is γ -iron with FCC structure. The specific heat of each phase can be taken as constant: $c_{\alpha} = 0.775\text{J/gK}$, $c_{\gamma} = 0.690\text{J/gK}$. Find the latent heat (per gram) at each of the two phase transitions.

Solution: