Faculty Of Engineering (Shoubra)

**Energy And Sustainable Energy Department** 



Chemistry



## $\Delta \mathbf{H}$ versus $\Delta \mathbf{E}$

(1)

Calculate  $\Delta H$  for the reaction

 $C_2H_{2(g)} + 2.50 O_{2(g)} \rightarrow 2CO_{2(g)} + H_2O_{(g)}$ 

if  $\Delta E = -1254.3 \text{ kJ}$ , at 25°C.

(2) The following reaction is carried out at 288 °K

 $CaCO_{3(s)} \xrightarrow{\Delta} CaO_{(s)} + CO_{2(g)}$ 

At this temperature the enthalpy change is 42.9 kcal. Calculate the change in internal energy.